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Motorcycle CLASSICS

January/February 2023

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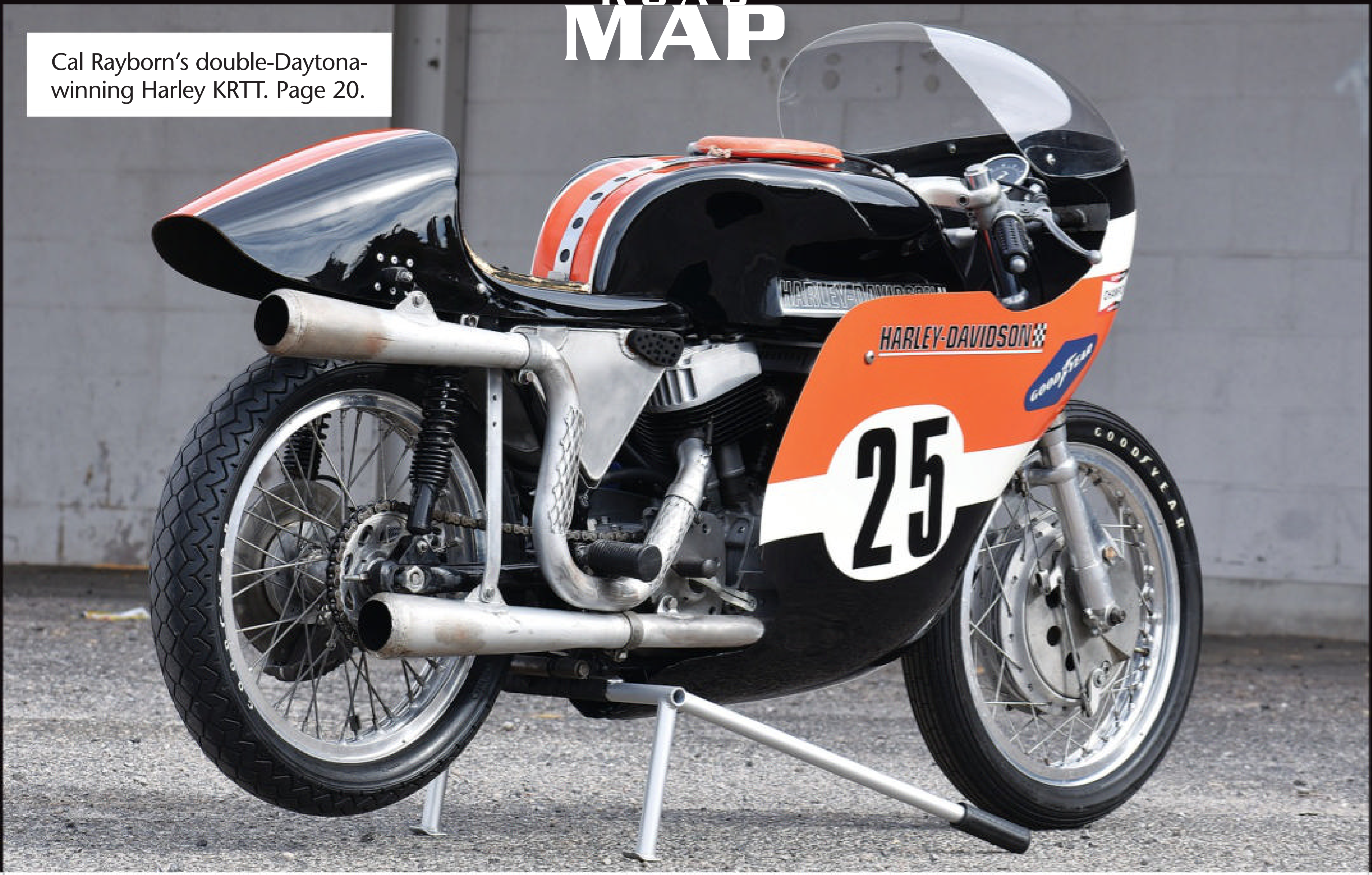

Cal Rayborn's double-Daytona-winning Harley KRTT. Page 20.

DAIN GINGERELLI

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Remember the classics through the *Street Bikes of the '50s, '60s, '70s, and '80s* series, *Pre-War Perfection* and the magazine archive. Also included in this package are the *MC* 2023 calendar and hat. Enter for a chance to win this package valued at $130 at MotorcycleClassics.com/sweepstakes/treasures

Retro rides

Hello and welcome to the January/February issue of *Motorcycle Classics*.

While we tend to stick mostly to covering older motorcycles around here, since the very beginnings of *MC* way back in 2005, we've kept an eye on new-to-market, retro-styled motorcycles.

We've covered many of them over the years, from several Royal Enfield Bullet singles all the way up to the more recent Continental GT and INT650. We've looked at the many iterations of the modern Triumph Bonneville family, along with Kawasaki W650s and the newer W800, a few Urals, Moto Guzzi V7s, and even bikes from U.S. upstart Janus Motorcycles. Ducati had their line of Sport Classics back in 2006, which were somehow short-lived. They may have been ahead of the curve. Today, since the reintroduction of the now popular Ducati Scrambler lineup back in 2014, we've heard rumors that the Scrambler models combined outsell the firms' sportier, more focused bikes by quite a margin. That may sound surprising, but there are 11 models in the Scrambler family.

I say all this to point out that we're inclusive around here, and while not every new retro model may grace our pages, from time to time we'll highlight something fun.

In fact, in this issue you will have the chance to read Alan Cathcart's road test of the new Royal Enfield Scram 411, a street-scrambler single based on the company's recent big hit, the Himalayan.

In speaking with readers over the years, it's no surprise to me anymore that there is a lot of interest in the retro models. Many of our readers, along with a classic bike or three (or many more), often have a late model touring bike, in addition to a modern retro classic of some sort.

A retro can be easy to own and maintain, and frankly, easy to replace if it's damaged or stolen. I have bikes I hate to leave out overnight when traveling, and I bet you do too.

I hope you enjoy Alan's look at the Scram, and if you don't already own one, I suggest you consider a retro classic for your garage someday, even if just for a season. You may find yourself riding more. And isn't that the point?

Cheers,

Landon

OLI TENNENT

The 2023 Royal Enfield Scram 411 in Graphite Blue. See Page 34.

Motorcycle
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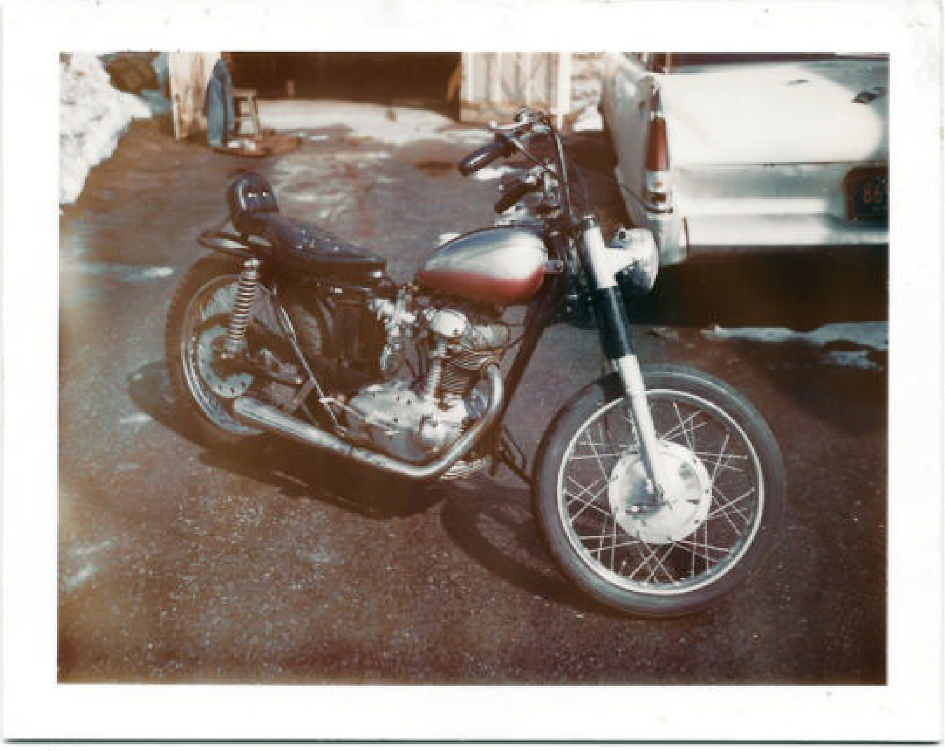
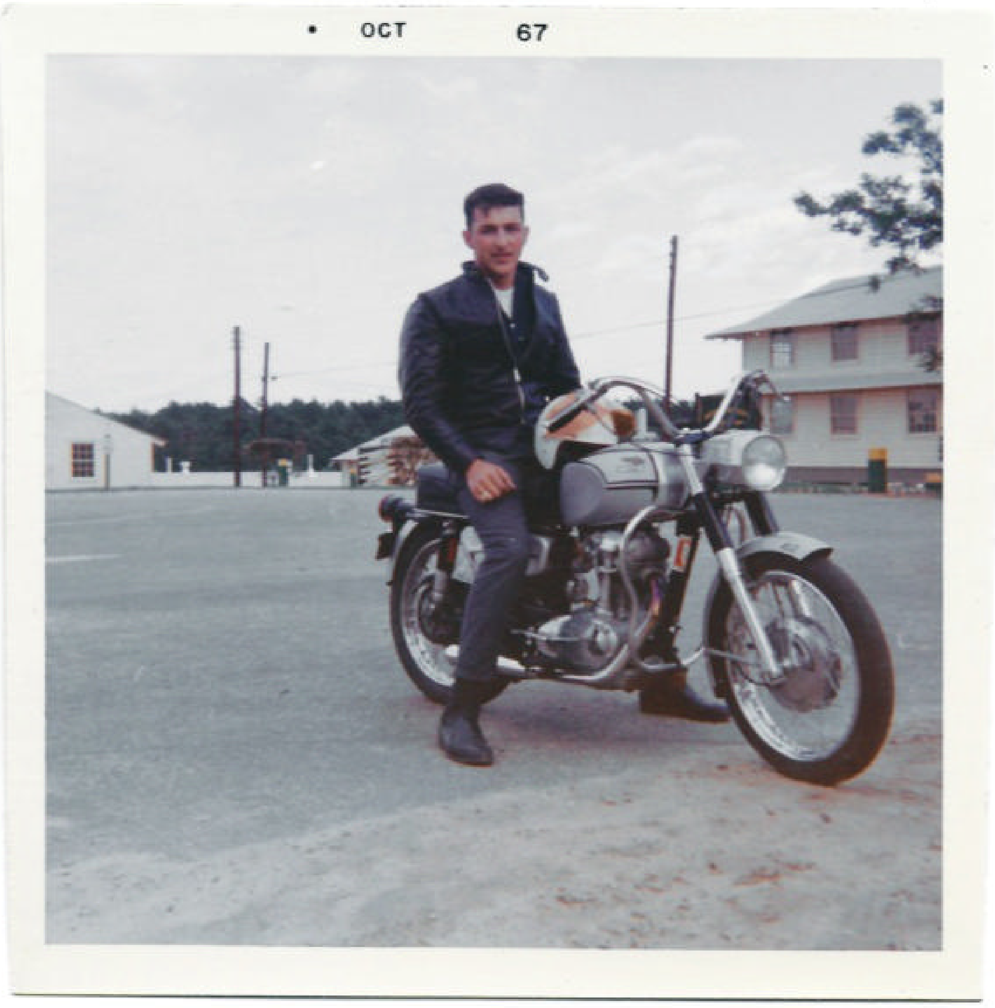
MOTORTREND+

“The detail photo shows the controversial 'Glass Fiber' airbox.”





Like an alarm clock

You woke me up. Attached are a couple of photos of my 1967 Ducati Sebring. I could not believe my eyes when I saw my bike on the front cover of your magazine. I have been getting *Motorcycle Classics* from the start and always wished that an article on this bike would show up sometime, never believing it would get a full review. Thanks.

I bought mine at a dealer in Fayetteville, North Carolina, when I was stationed at Fort Bragg in 1967. $610.00 got me the bike and I never looked back. As you can see, in 1971 I gave it some modifications. 1977 was the last time I rode it. It's stowed in a shed waiting for me to bring it back.

In 1998 Ducati gave me a dream bike by making the ST2. That's my ride today. Fantastic bike. I could go on and on about the 350.

John Martino/Onchiota, New York

Swiss Army bike?

Great article on the 1948-1964 Triumph 500s in the November/December 2022 issue … but … what's that Swiss Army knife doing on the back pilon of the ’57 TRW?

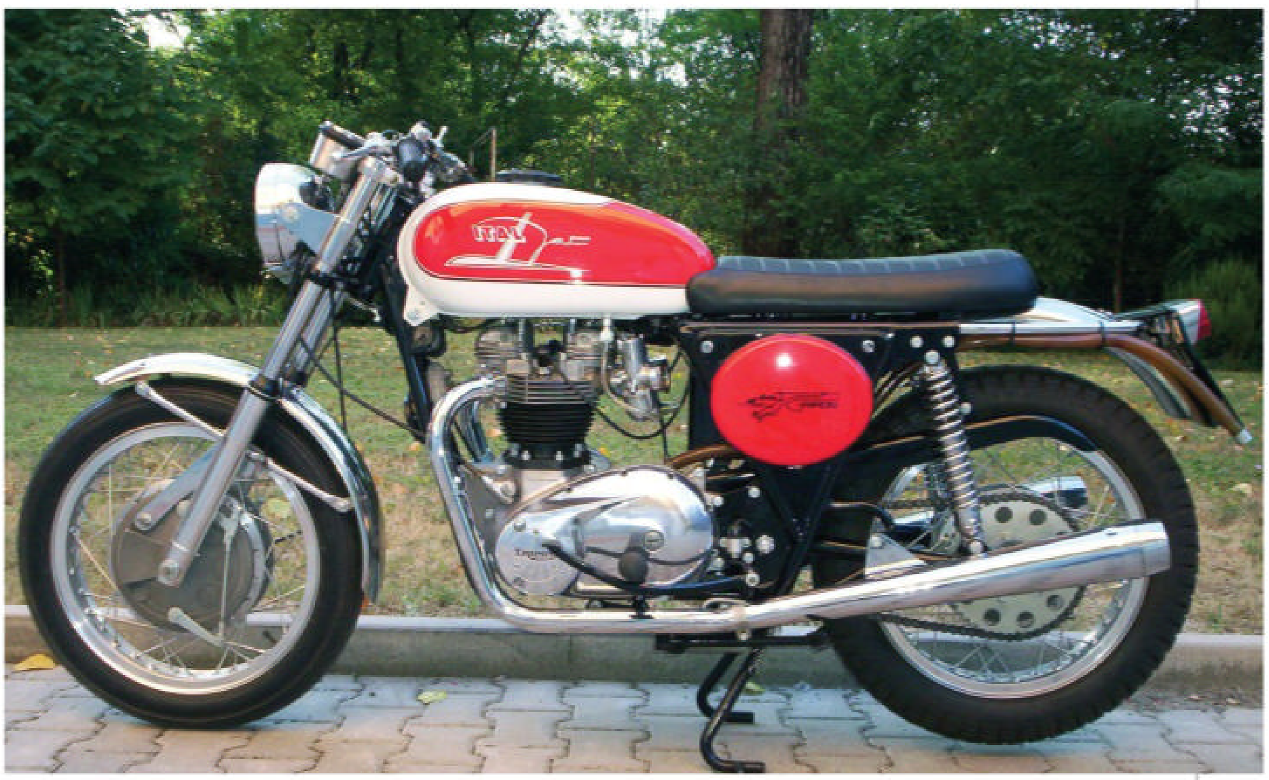
Randy Riblet/Rio Vista, California

Hi Randy,

Thanks for the note. How funny. I didn't see the knife until you mentioned it. The day Robert Smith went to shoot this bike they had trouble getting it started. I can only imagine they were using a screwdriver on the knife to fiddle with a carb adjustment and forgot to put it away. But I had to ask Robert, who replied “Close, but no Corona. Randy obviously has better eyes than me. I didn't see the knife at all. By that time in the shoot, we had fixed the starting issue. Reason for the Swiss Army knife … Tom used it to take the license plate off!” — Ed.

> "The Grifon was never produced with those exhaust pipes and silencers."

Italjet clarification



I received from friends the July/August 2022 issue of *Motorcycle Classic* magazine in which an Italjet Grifon is presented. As the holder of the Italjet Historical Archive, it seems only right to make a couple of clarifications. The Grifon you presented was never produced with those exhaust pipes and silencers. Furthermore, its color does not correspond to those originals. The person who restored that Grifon in Italy is a friend of mine and, despite my insistence not to, he decided to equip the bike with two high exhausts of pure invention. Never, say never, the Grifon was produced with that type of exhaust.

And the amaranth-cream coloring is also fancy. For the second series Grifon the colors used were: white-red, white-green, green-black, and blue-silver.

So at this point what I feared happened: what never existed became truth.

I enclose a couple of photos of my Grifon, the last of the series produced, for a total of 90 units, 15 of the first series and 75 of the second (including some California specimens). Thank you for your attention.

Pasquale Mesto /ITALJET Archivio Storico

Pasquale,

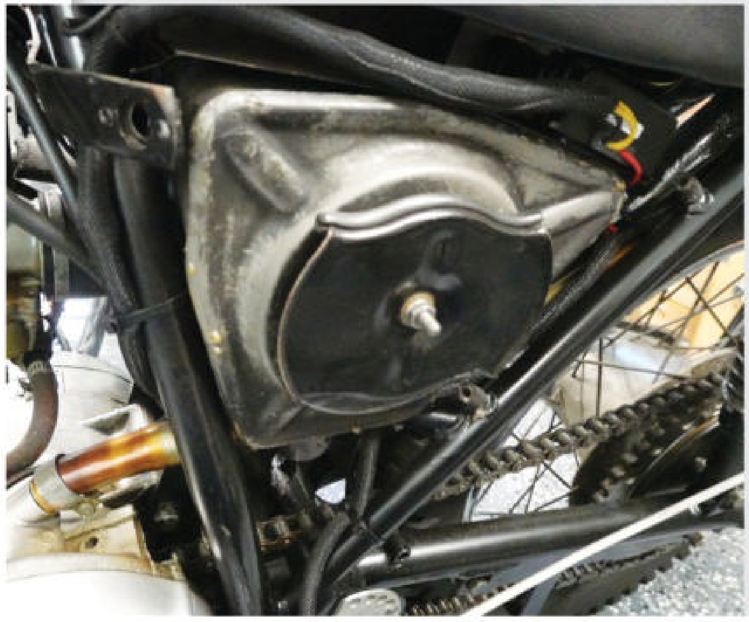
Thank you for the letter. We were aware that the paint choices and high exhaust were non-stock, though maybe we failed to point that out specifically. We appreciate you sharing this letter and photos of your Grifon with our readers. — Ed.

More info on TR5Ts

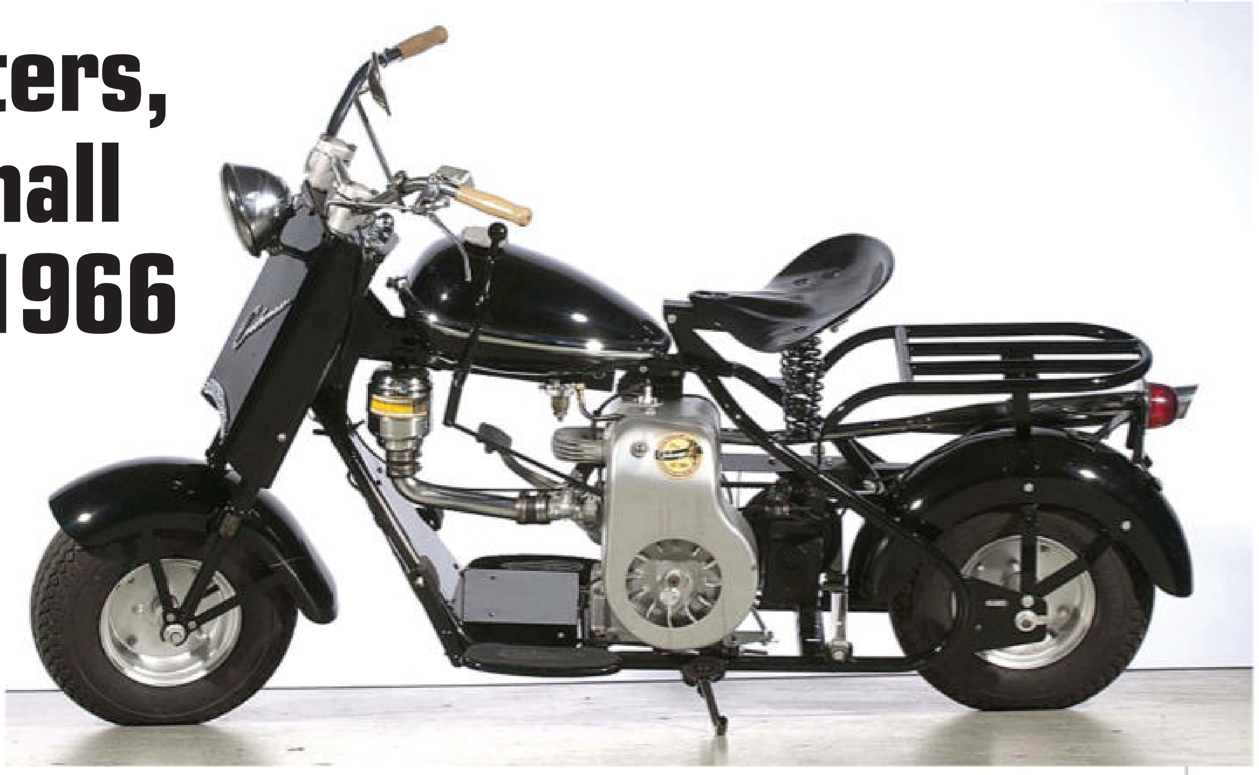
I look forward to your magazine arrival and read it cover-to-cover. The tech support is great, plus well written articles. After reading your short article about the Triumph TR5Ts I thought I'd share a pic of my small collection.

They are in different stages of being completed, as I have to gather correct parts. They will soon be completed. The detail photo shows the controversial "Glass Fiber" airbox used on the 1974 TR5Ts. Some scholars claim they were never used, due to the employee walkout/sit-in, but here it is! Correct passenger footpeg mounting seems to be uncertain also. Maybe I haven't found the right person.

Gene McKillips/via email



American Scooters, Big Deals on Small Wheels: 1950-1966 Cushman Eagle



Which among us gearheads didn't hanker after a powered two-wheeler in our early teens? Many resorted to lashing any available internal combustion engine (like from a chain saw) to a bicycle. The concept was so good it was embraced in the Whizzer power bike.

But often the only powerplant available to an enterprising and constructive farm kid would have been a utility engine designed to power log splitters, sawmills, cherry pickers, pumps and so on. These were sturdy, heavy units designed for reliability and ease of maintenance rather than performance, and therefore less suitable for clipping to a bicycle frame. One such motor was the Husky.

Cousins Everett and Clinton Cushman began making Husky-brand proprietary engines in Omaha, Nebraska, around 1902, though both quit the company within 20 years. The Cushman company was then acquired by Charles Ammon of the Easy Manufacturing company, moving the headquarters to Lincoln. The first Cushman scooter was introduced in 1936, much as a way of boosting Husky sales. It was a relatively crude assembly of parts, while its step-through ergonomics and steam-punk styling echoed the contemporary, California-built Salsbury scooter. It featured a single-cylinder flathead Husky engine and Auto Glide single-speed transmission with centrifugal clutch. It was fitted with only one brake, in the rear drum, and eschewed any lighting equipment.

1950-1966 CUSHMAN EAGLE

Claimed power	8hp (Husky M8 engine), 9hp (OMC M9 engine)
Top speed	50-55mph
Engine	Husky M8: fan-cooled, side-valve single, 318cc (76.2mm x 69.85mm), OMC M9 fan-cooled OHV single, 354cc (89mm x 57mm)
Weight	225-335lb, depending on specification
MPG	75mpg
Price then/now	$425 (est., 1958)/$2,000-$7,000

During World War II, the models 32 and 34 arrived, the 32 with Auto Glide and the 34 with a 2-speed gearbox, hand shift and foot clutch. Cushman also built close to 5,000 Military Airborne models, which were designed to be dropped into the battlefield by parachute. During the late 1940s, Cushman produced the Highlander trail-oriented model and later built scooters to be sold under the Sears Allstate brand.

The company offered a bewildering variety of models of increasing sophistication through the '40s and '50s, with transmission options including the Auto Glide, hand shift 2-speed, and Variomatic-type CVT drive. They were also available in both 8 horsepower and 5 horsepower versions. The latter option was intended for those States that applied a horsepower limit for young riders. Although many States permitted riders of 14 years on the street, their machines were required to be under 5 horsepower. Cushman produced compliant models right up to 1964.

For 1950, Cushman revised its Model 50 to produce the Eagle, which became the company's most popular and best-selling model. And while the earlier step-through machines were prosaically functional, the Eagle added glamour and glitz. Strongly influenced by the full-size American motorcycles of the time like H-D's Hydra-Glide and Indian's Chief, the Eagle's extravagant styling included a large sprung seat, trailing-link front fork, and a teardrop gas tank joining the seat to the handlebar. A rear luggage rack was also included. It was joined in 1952 by the economy single-speed "Springer Eagle."

The first Eagles were known as "barrel spring" because of the profile of their fork springs. Power came from the Husky M8 8 horsepower engine paired to a 2-speed transmission with centrifugal clutch. Primary drive was by belt with chain final drive.

1955 saw the introduction of tubular telescopic front fork legs with the headlight mounted on a fork shroud. 1959 brought the substantially revamped Super Eagle, still with the 8 horsepower engine, but now with the engine and transmission fully enclosed. The fork shroud also housed the headlight from 1959 on.

In 1957, Cushman had been sold to Outboard Marine Corp., and 1961 saw the introduction of the 9 horsepower overhead valve OMC engine, the new model being the Super Silver Eagle with 12-volt electrics and available electric start. However, vibration problems with the engine saw the re-introduction of the Husky iron engine for 1961-1962, though the OMC engine was re-fitted from 1962-on. The final Super Silver Eagles also had

> "It's reported that the company made around 15,000 scooters to 1958."

a speedometer, turn signals, mirrors and a buddy seat. But by this time, the cosmetics could no longer disguise the antique contraption underneath. Cushman assembled its last consumer scooter in 1966. It's reported that the company made around 15,000 scooters to 1958.

And while Cushman scooters look bizarrely comical to modern eyes, they have a passionate following reflected in prices gained at auction in recent years. No doubt, fond childhood recollections of that first motorcycle ride and the exhilaration that it burned into memory are a huge factor in their popularity. Around 2014, it was also possible to order an all-new, street-ready Cushman II Eagle loosely modeled on the original but with modern components, though the website is no longer active. Data and time line from hobbytech.com. MC

CONTENDERS

Two more American scooters

1960-1964 Mustang Thoroughbred

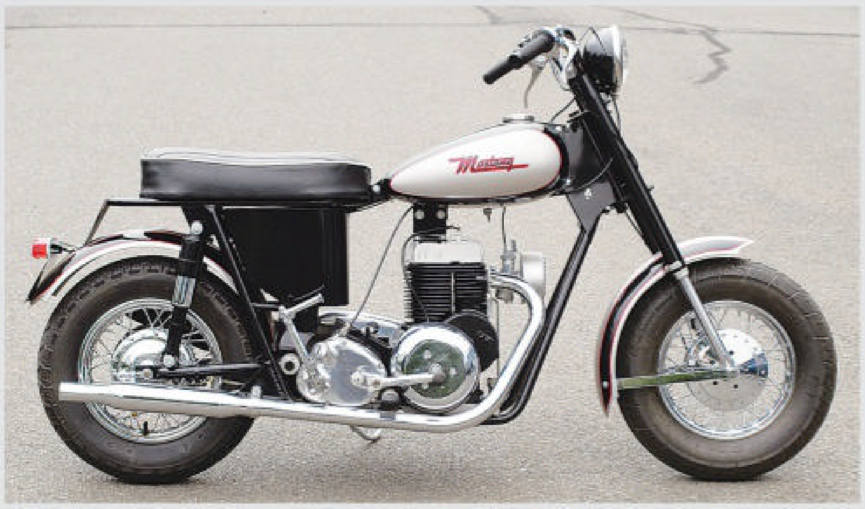
If Cushman had started with a clean sheet in 1960, they might have come up with something like the Mustang Thoroughbred, which was essentially a standard motorcycle with scooter-sized wheels. The 319cc iron-barrel, alloy flathead single was fed by an Amal Concentric or Dell'Orto carburetor and drove a 4-speed Burman gearbox.

The chassis employed a duplex tubular frame, telescopic fork and swinging-arm rear suspension. The 12-inch wheels were built around full width hubs with unusually short spokes. A dual seat (covering a huge toolbox), teardrop gas tank and downswept exhaust completed the package

Aside from its role as a utility or beginner bike, the Mustang proved to be an unlikely competitive weapon on short, tight racetracks thanks to its scant weight and low center of gravity — so successful that the AMA Class C rules were changed to require wheels of at least 16 inches!

Said *Cycle World* in 1963, "We recommend the Thoroughbred … Its performance is satisfactory, it rides and handles like larger machines, it could hardly be simpler to operate, its appearance and finish are first rate, and it is priced right."

- Claimed power: 12.5hp @ 3,600rpm
- Top speed: 71mph (period test)
- Engine: Air-cooled, side-valve single, 319cc (69.85mm x 76.2mm), 4-speed transmission
- Weight (curb): 220lbs
- Fuel capacity/MPG: 2.4gal/73mpg
- Price then/now: $539/$3,000-$10,000



1960-1965 Harley-Davidson Topper

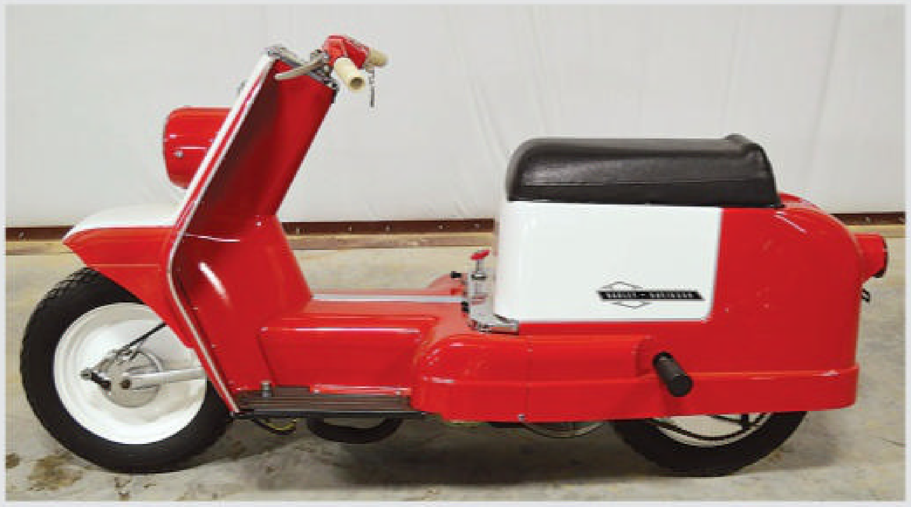
Harley's offering in this trio was much closer to the European concept of a scooter. Like a Lambretta, the drivetrain and suspension were mounted to a tubular spine frame with encompassing bodywork attached.

The Topper's power came from an updated version of the 165cc 2-stroke engine used in the Model 165 motorcycle, but with reed valve induction. The engine sat horizontally below the bodywork and was started by a recoil rope, just like a lawn mower. Drive to the rear wheel was by a continuously variable transmission (CVT) known as the "Scootaway Drive." Suspension consisted of a leading link front fork with hydraulic damping, and a swinging arm at the rear. Brakes were 5-inch drums front and rear.

With the Topper lacking the fan cooling common to most European scooters, and with its engine buried under the bodywork, overheating problems quickly arose. A new alloy cylinder head was fitted to improve heat dispersal. And the exposed CVT also proved vulnerable to road debris which would cause it to malfunction. This was fixed by enclosing it in an oil bath.

But by the time the Topper was fully ready for market, the scooter craze was winding down, and the influx of reliable, small-capacity motorcycles from Japan sealed its fate. It's reported that fewer than 3,000 Toppers were sold.

- Claimed power: 9hp
- Top speed: 46mph
- Engine: Air-cooled, 2-stroke single, 164cc (60.3mm x 57.9mm), 8:1 compression
- Weight: 237lb
- Fuel capacity/MPG: 1.7gal/80mpg
- Price then/now: $450/$2,000-$7,000



SUPERMONO
699SC
CONCEPT

(L to R): Ultan Guilfoyle, Brian Case, Pierre Terblanche, Ed Boyd, Greg Brew and Miguel Galuzzi discuss the future of motorcycle design in the Barber Advanced Design Center (BADC).

CLASSIC SCENE

The 2022 Barber Vintage Festival

Story and photos by Corey Levenson

The 17th edition of the Barber Vintage Festival took place on a gloriously warm and dry weekend in Leeds, Alabama from October 7-9, 2022. The event drew 71,600 attendees over the three days and offered racing, swap meets, and a benefit dinner as well as tech sessions on tuning, pinstriping and wheel building. All this in addition to showcasing the largest collection of motorcycles in the world. As always, it was a challenge to take it all in.

It was the final race weekend for the American Historic Racing Motorcycle Association and AHRMA put on a great show. The paddock and track reverberated with the sounds of motorcycles of all ages and displacements competing for class championships.

Two enormous swap areas were full of treasures while several manufacturers including Zero, Yamaha, BMW and KTM offered demo rides. In addition to hosting vendors and commercial displays, the Expo area featured the twin spectacles of the Wall of Death and the Globe of Death.

The 2022 Grand Marshal was Brian Slark, American Motorcycle Association Hall of Fame member and Technical Consultant for the Barber Museum. Now in his early 80s, Brian has had a long and distinguished motorcycling career. In the 1960s, he moved from his native England to Los Angeles, where he raced motocross, worked for BSA and Norton-Villiers-Triumph and ran his own British motorcycle shop for over a decade. Since 1996, Brian's been on the staff at the Barber Museum.

The annual Friday evening "Motorcycles by Moonlight" benefit dinner featured silent and live auctions and an interview with Brian. If you're feeling flush, buying a ticket to this event is a great way to support the museum while seeing old friends and making new ones.

New for this year was a series of presentations and panel discussions in the Barber Advanced Design Center (BADC). The Center explores the future paths that motorcycle design might take while exploiting the potential of modern design and manufacturing techniques. It's also a venue for introducing the next generation of young visionary designers and engineers to new possibilities.

The Center was launched last year and is led by Brian Case, best known as the designer of the Birmingham-built V4 Motus motorcycle. A video conference-enabled remote collaboration between the BADC and South African Pierre Terblanche (designer of such iconic motorcycles as the Ducati Supermono, 888 and 999) resulted in a modern remake of the original Ducati Supermono from the early 1990s.

This year, Brian and journalist Neale Bayly hosted a series of seminars on several topics including an update on the creation of the "new" 3D-printed Supermono as well as tales of the original Supermono from the 1990s. The discussion was led by an on-site Pierre and included journalist/racers Neil Spaulding and Sir Alan Cathcart, both of whom raced the original Supermono in the '90s.

Three additional sessions in the BADC included: 1) Neil Spaulding speaking about current MotoGP technology and how some aspects can be traced back to Norton isolastics, 2) Ed Boyd (Sr. VP of Design at Dell) telling the story behind the "Fuse" concept bike designed by him and built with help from Revival Cycles in Austin, Texas, and 3) a group discussion of the future of motorcycle design. This last panel was led by Ultan Guilfoyle (Google him; you'll be impressed) and included Brian, Pierre, Miguel Galuzzi (Design Chief at Piaggio and creator of the Ducati Monster and many others), Ed Boyd and Greg Brew (Head of Design at Polaris/Indian). For anyone interested in motorcycle design past, present and future, it was fascinating.

Most of the Barber Vintage Festival activities feature motorcycles of the past, whereas the BADC sessions shifted the focus to motorcycles of the future. If the Center's activities on the 5th floor of the museum are any indication, we can expect some exciting developments in the years ahead.

The Barber Vintage Festival continues to be the premier event of its kind and should be on the bucket list of anyone interested in vintage, classic (and future?) motorcycles. The 2023 Festival is scheduled for October 6-8, 2023. More information about the event can be found on the Museum's website (barbermuseum.org/barber-vintage-festival). MC

Terblanche pointing out features of the "new" Supermono project.

Brian Slark, AMA Hall of Fame Member, Barber Museum Technical Consultant and the 2022 Grand Marshal.

The museum's rare and beautiful Ducati Supermono built in the 1990s.

TLC needed: a mostly-there Norton Fastback in the swap meet.

A rare NSU overhead cam single in the swap meet and a Rickman Honda CB750 in the Vintage Japanese Motorcycle Club area.

If you needed a gas tank for your Royal Enfield, this swap meet vendor had you covered.

Many attendees prefer to camp. This was the scene on "Norton Hill" near Turn 6.

AMA Hall of Famer, David Aldana (in shades) chatting in the paddock.

This BSA unit twin is proof that you don't need an exotic bike to go racing.

REBEL DOG RACING
69

Prepping race bikes seems to be a never-ending task.

There was no shortage of lovely Ducatis in the paddock.

9A
SYD'S CYCLES
DUCATI
9A

17
17
NORTON

Kenny Cummings of NYC Norton heading out on-track.

An Aermacchi horizontal single by any other name is still an Aermacchi.

Harley Davidson

Twin Czechs: a brace of racing JAWAs in the museum.

1951 Ducati 65cc racer converted from pushrod to bevel drive overhead cam by Giancarlo Morbidelli.

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A LITTLE HELP FROM HIS FRIENDS

1948 Norton International Model 30

Story by Margie Siegal
Photos by Nick Cedar

Getting through the pandemic, with the accompanying isolation and worry, was difficult for many people.

Mike Rettie managed through fly fishing, gardening and finishing the restoration of this 1948 Norton International, a very fast bike for its era and an unusual find in the United States. Mike's International is not only fast, but therapeutic. "It got me through Covid and transitioning to retirement," he says.

Norton Internationals come from an era where the English Norton company was a top road racing contender and built technologically advanced machinery. In the 1940s, Norton riders were on the podium in most international events. While most 1940s motorcycles made do with a side-

valve or overhead valve engine, the Manx factory racers had dual overhead cams. The postwar production racers had telescopic forks and, from 1951, the Featherbed frame, which set new standards in fast handling. Although production racers had a single overhead cam, racers with a good resume might be allowed to buy a DOHC Manx from the factory.

Power to the people

If you wanted something that was street legal, but looked and performed like a Manx, you bought an International, basically a detuned Manx with lights. It came in both 500 and 350 versions, and was aimed at amateur riders who wanted to contest the Clubman's TT race on the Isle of Man. One of the benefits of organized road racing in postwar Britain was access to gasoline.

Although the war was over, Britons were still dealing with the aftermath. England had huge war debts, and manufacturers were ordered to export as much as possible. Many items were rationed, but gas in particular was in short supply. Many motorcycle club members rode bicycles to meetings. The demand to export meant that many new motorcycle models were not available in the Home

1948 NORTON INTERNATIONAL MODEL 30

Engine: 490cc air-cooled 4-stroke single, 79mm x 100mm bore and stroke, 7.12:1 (for English "pool" petrol) 9.3:1 (set up for American premium) compression ratio, 29.5hp @ 5,500rpm
Top speed: 97mph (period test)
Carburetion: Amal TT 36 type, 1 5/32in bore (stock) Amal Monobloc (on bike)
Electrics: Lucas magdyno
Transmission: 4-speed, foot shift, chain final drive
Frame/wheelbase: "Garden gate" full cradle frame/ 54.75in (1,391mm)
Suspension: Roadholder telescopic front forks, plunger suspension rear
Tires: 3 x 21in front, 3.25 x 20in rear (stock), 3.25 x 19in rear (on bike)
Brakes: 7in (178mm) SLS drum front (stock), 8in (203mm) SLS from 1953 International (on bike), 7in (178mm) SLS drum rear
Weight: 390lb (177kg)
Seat height: 28.5in (724mm)
Fuel capacity: 4.5gal U.S. (17ltr)
Price now: $10,000-$25,000

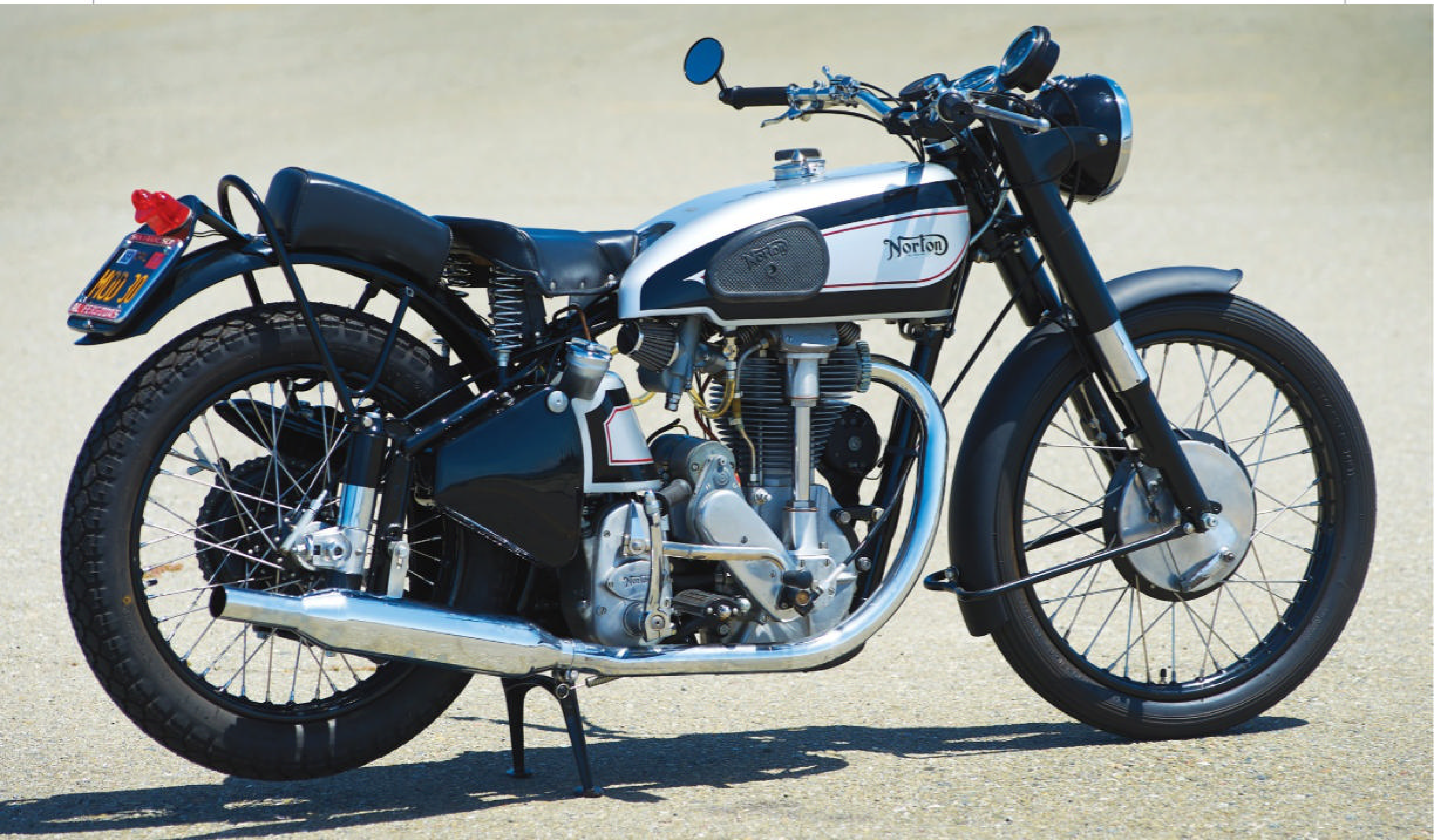
Countries. Frustrated English riders read about the wonderful new machines that were being shipped to South America, South Africa and especially to the United States, and gritted their teeth. A bright spot was the resumption of racing in 1946 with the Manx Grand Prix (an amateur event on production machinery) in 1946, and the iconic Isle of Man TT races in 1947.

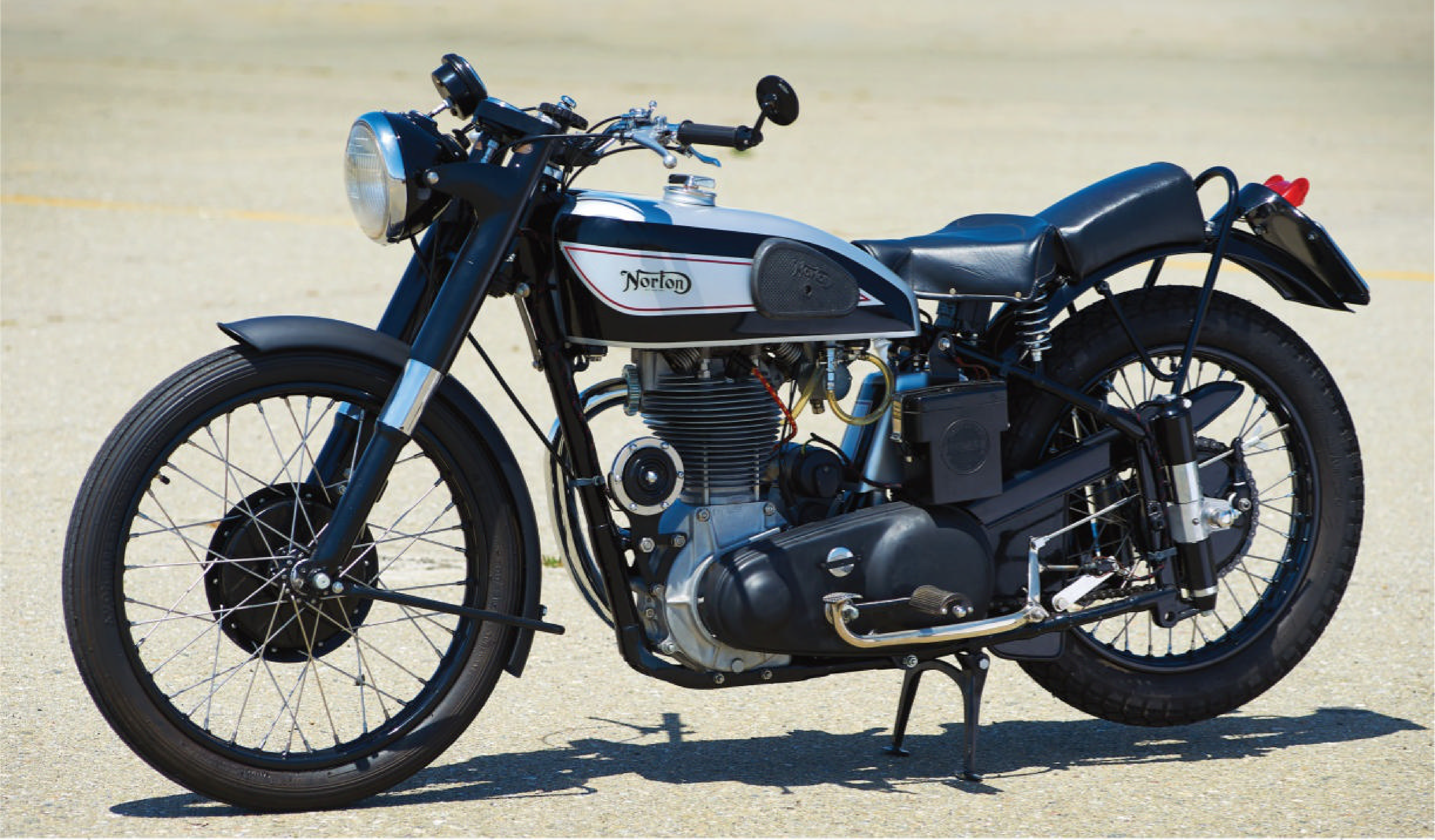
Nortons in the U.S.

On the other side of the pond, imports of Nortons and other British two wheelers were ramping up fast. American GIs had become acquainted with lightweight, good handling British machinery during World War II. They liked what they saw, and English motorcycles became popular quickly. Gilbert Smith, the managing director of Norton, spent seven weeks traveling through the U.S. in September 1947, and wrote about his experiences in *The Motor Cycle*, a weekly British magazine. Although there had only been a small handful of prewar U.S. Britbike dealers, by 1947 there were 60 shops selling Triumphs, BSAs and Nortons in the U.S. Some 10,000 British motorcycles had been imported to the U.S. as of September of that year.

Unlike a British rider, who had to pull strings and hope to get a top of the line bike, an American rider just had to reach deep in the wallet. At the time, a Norton International cost $1,071.98. Although that sounds like a bargain, average U.S. family income at the time was $3,200 a year.

Imports of Nortons and several other makes were also promoted by the turmoil at Indian, then one of the two major American motorcycle companies. The new owner of Indian, Ralph Rogers, had bet the farm on a new line of lightweight singles that did not sell. As a condition of a $1.5 million loan





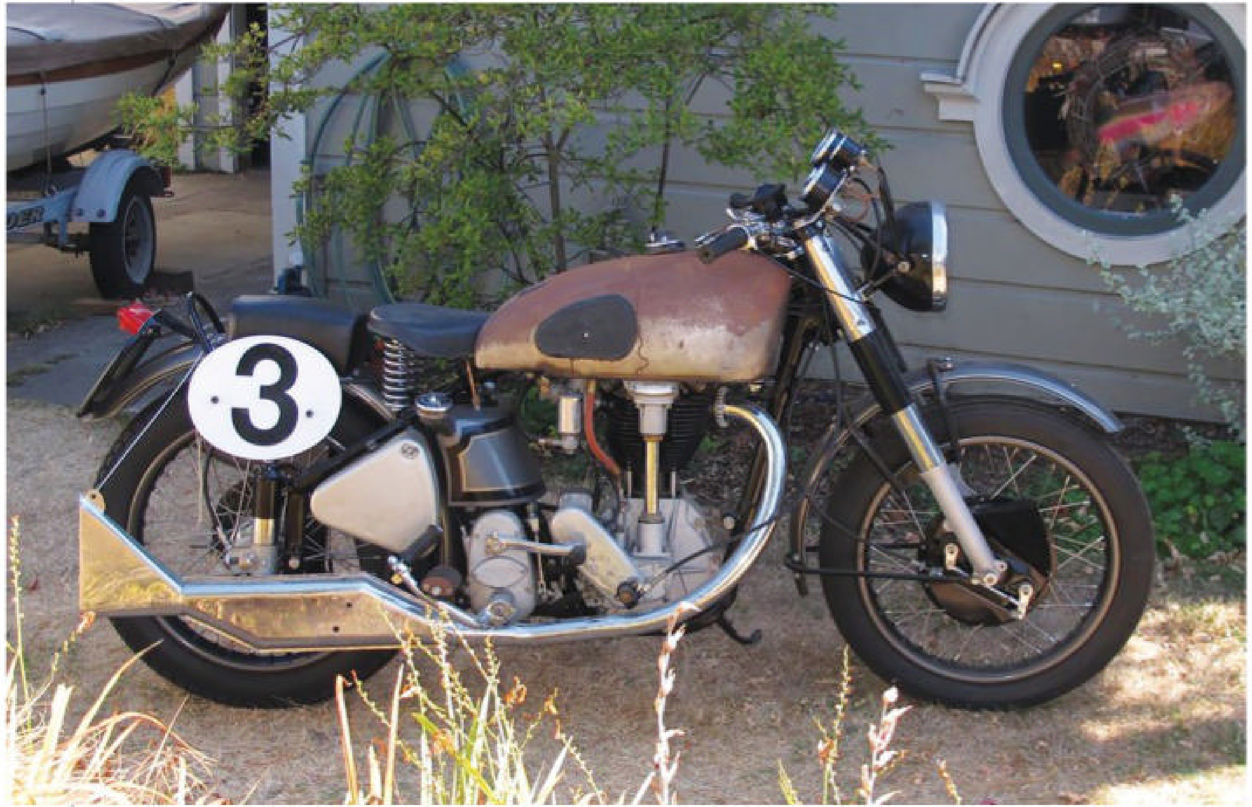
from a British firm, Indian dealers were asked to carry several British makes, including Norton.

The Norton Internationals that were displayed in postwar American dealerships were a descendant of the factory race bikes of the late 1920s. After Velocette pioneered overhead cam engines on motorcycles, Norton followed with its own design a couple of years later. Norton factory racing success was followed by production racers for sale. First offered to the general public with a need for speed in 1932, these overhead cam singles had a 4-speed foot shift transmission. Valve spring steel in the 1930s was prone to break, and one cure tried was "hairpin" valve springs, horizontal springs whose ends bear on the rockers. Norton started using these in 1935. Hairpins are bulky and difficult to enclose, and, when better valve spring steel became available in the 1950s, they went swiftly out of fashion. Other prewar upgrades to the International were optional alloy heads and cylinders, and a plunger frame. In the late 1930s, Norton's overhead cam race bikes were renamed Manx. The International name was reserved for the top of the line overhead cam street single.

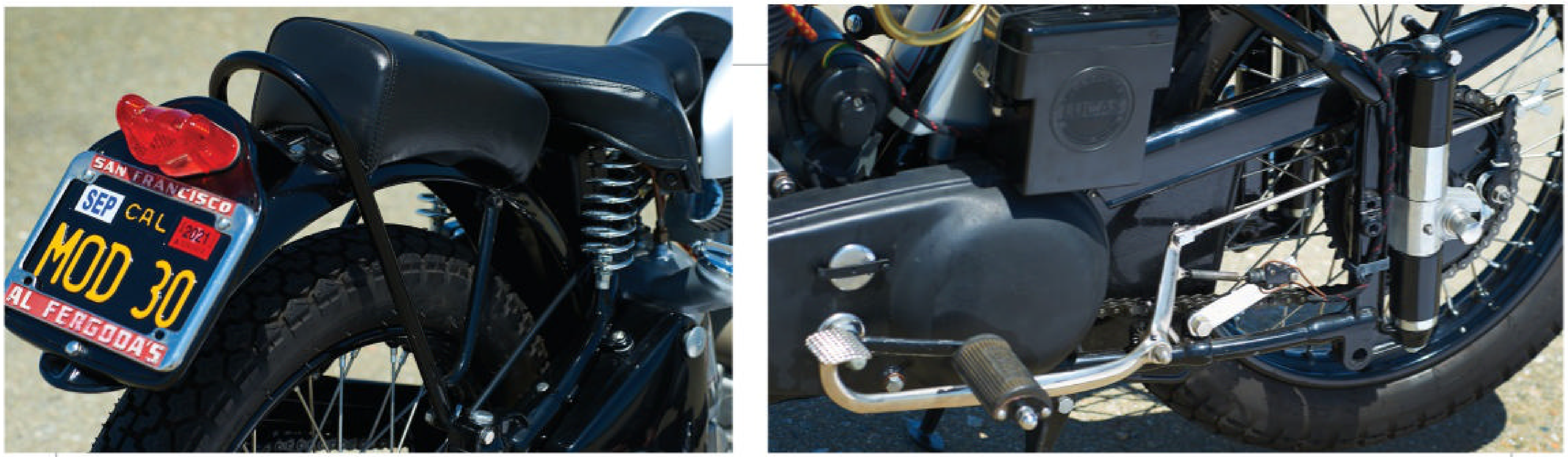
After the war

England went to war in 1939, and civilian motorcycle production was suspended for the duration. When both the 350 and the 500cc Internationals reappeared in 1947, the cast iron engine was standard, although the alloy top end (from the Manx production racer) was available at an extra charge. The single overhead cam ran on a bevel drive shaft driven from the lower end. Ignition was provided by a Lucas magdyno, a combination magneto and generator which may have been the inspiration for several Lucas jokes. The carburetor was an Amal TT (a racing carburetor), but the muffler was the same as used on several other Norton models of the time. The gearbox had a low first gear to assist with kickstarting, with the top three gears closely spaced.

The Garden Gate plunger frame was one of the first sprung frames (the Vincent frame was another) that was proven to handle at speed. Front end suspension was upgraded from the prewar girders to Roadholder telescopic forks with rudimentary hydraulic damping. Both the gas tank and oil tank were large, and finished with chrome plating and black and red pinstriping. The stock muffler choked the engine,



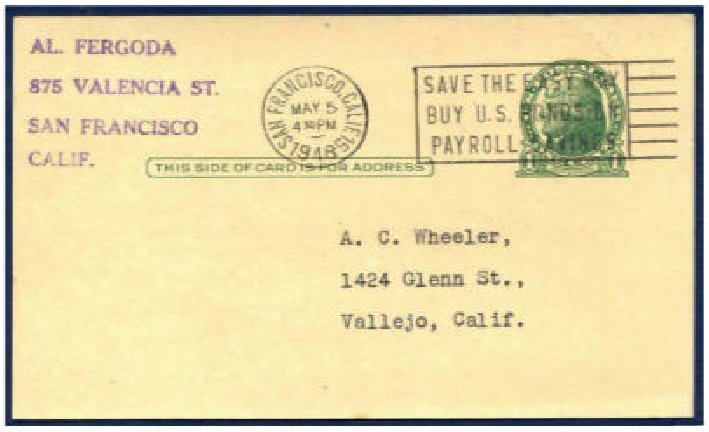
The bike as delivered. "Rust Never Sleeps."



Rare find: a genuine Al Fergoda license plate holder (left). Plunger frame and left foot brake lever mark 1940s Nortons.

and one of the first things an owner would do would be to get rid of it and either race with a straight pipe or, if the bike was going to used on the road, bolt on an aftermarket replacement. In 1947, both major English motorcycle magazines had a chance to test a 500cc International with a Brooklands exhaust (a nonrestrictive but relatively quiet muffler). *The Motor Cycle* wrung 97mph out of the OHC single, despite the fact that the only gasoline available was so awful that the postwar International had only a 7.12:1 compression ratio in order to cope.

Tuned up and with a jockey aboard who knew how to ride this bike, the International won races. Geoff Duke won the Senior Clubman's race on an International in 1949, Phil Carter won on another one the next year and Ivor Arber won on a third in 1951. In the United States, most races were off road or flat track, and the only real road race was held at Daytona. During the 1940s and early-1950s, Manx Nortons were regularly on the Daytona podium. Dick Klamfoth and Billy Matthews won Daytona on Manxes on such a regular basis that overhead cam machines were banned from American competition for the 1953 season. Bob McKeever raced an International at Daytona, and is the only person known to do so.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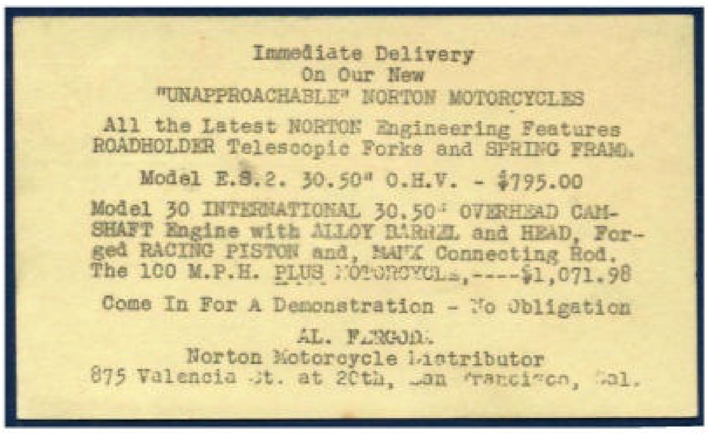
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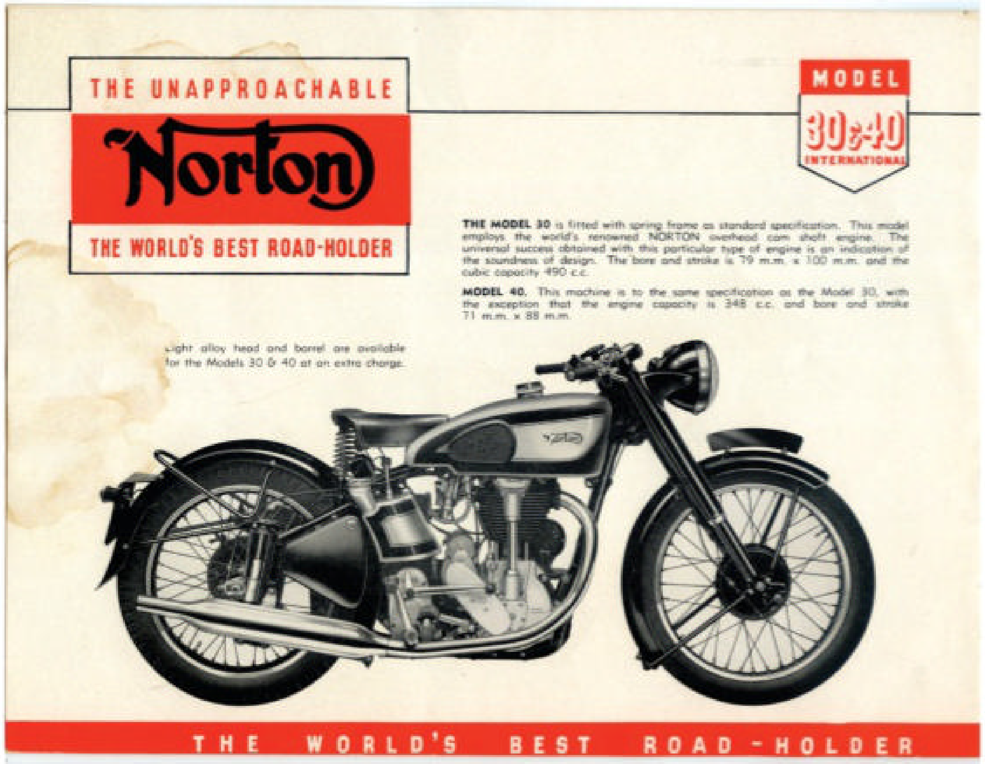


THE MODEL 30 is fitted with spring frame as standard specification. This model employs the world's renowned NORTON overhead cam shaft engine. The universal success obtained with this particular type of engine is an indication of the soundness of design. The bore and stroke is 79 m.m. x 100 m.m. and the cubic capacity 490 c.c.

MODEL 40. This machine is to the same specification as the Model 30, with the exception that the engine capacity is 348 c.c. and bore and stroke 71 m.m. x 88 m.m.

Light alloy head and barrel are available for the Models 30 & 40 at an extra charge.

A postcard announcing Internationals at Fergoda's (top). This bike was one that Fergoda sold. The brochure is a period original.

Some assembly required

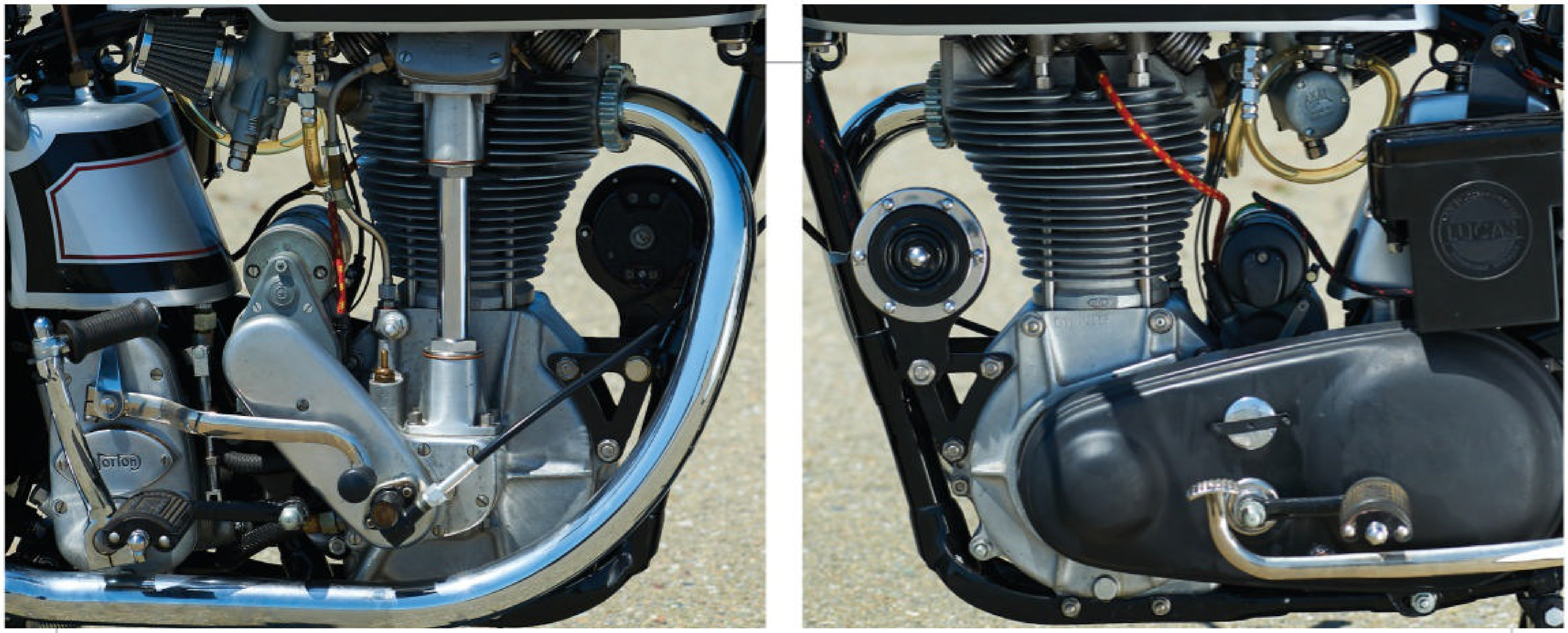
Most people who bought Internationals in the U.S. apparently just wanted to go fast on public roads. On the West Coast, San Francisco Norton dealer Al Fergoda sent postcards to his customers in 1948, advertising a 500cc (Model 30) International for sale with the Manx alloy barrel and head, Manx higher compression piston and Manx connecting rod. The Norton Owners Club in England has the factory records, and was able to confirm that the engine in Mike Rettie's International was from one of the bikes shipped to Fergoda. The chassis is from a different 1948 International, making the machine a "mongrel."

Mike has been working on this machine on and off for years. "A close friend began collecting bits for this bike in San Francisco in the early 1980s," Rettie explains. "He made good progress to the point of assembling a roller in an ES2 chassis but ran out of enthusiasm at some point and gave the project to me.

"The first thing I noticed was that the rockers were not properly centered on the valves. As I dug into the engine, I found other problems which led me to tearing down the engine and eventually the whole bike. One thing led to another and I decided to try to find all proper Inter parts to assemble this machine. There must be major parts from at least half a dozen defunct Inters that found themselves reborn in this incarnation."

Mike was then working as a machinist in a shop that specializes in high end sports automobiles, and knows how to assemble an engine. "The cylinder head is bimetallic — bronze and aluminum. It was tricky to repair — I had to have the valve seats in the bronze "skull" braised up to revive them and then re-cut the seats."

When he started looking for parts, overhead



The tower drive for the single overhead cam (left). The competition engine is almost entirely made of aluminum alloy.

cam Norton enthusiasts came out of the woodwork to help. The frame was found in rural Oregon, the gas tank was bought from an eBay merchant on the East Coast, and a friend parted with an oil tank in his stash. Different members of the Norton Owners Club donated parts, including the larger front hub and brake. "I collected parts from all over. Paul Norman and Ian Bennett in the U.K. and Ken MacIntosh from New Zealand were standouts," Mike says. "A friend in Germany came up with the alloy head and barrel. The engine was supplied with a Manx connecting rod, the same as when originally built. A new oversize Manx piston was also located in Germany."

A lot of parts are unique to the International, including the rear brake pedal, and are scarce on the ground. When Mike couldn't find something, he made it, including the valves and valve guides. The special tools needed in International assembly have disappeared in the mists of time, so Mike made them as well. With all machining completed and all parts in house and Mike newly retired from his long-term job, work on the International sped up. "It was tricky to put this bike together. There is a lot of careful shimming to do and in the proper order to get the cam drive backlash correct. The cam box is not part of the head, and there were a lot of old, worn parts. The timing cam lobes are infinitely timeable. The oil pump is an interference fit in the crankcase."

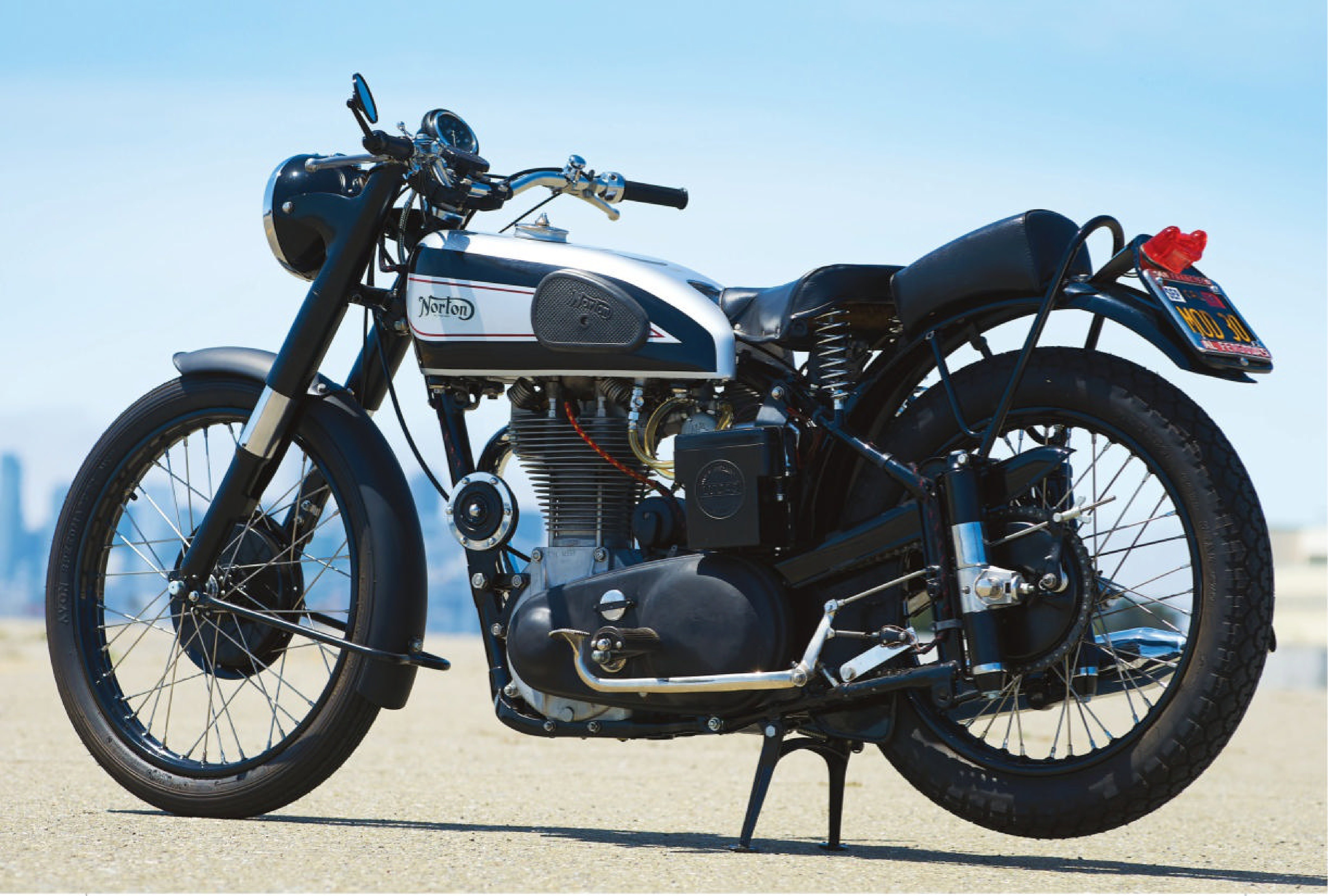
Besides general engine and machining knowledge absorbed from years working with engines, Mike had a special guide, *Garden Gate Manx, The Book About My Bike, C11M14566* by Niels Schoen, a Dutch CAD engineer. Schoen inherited a 1947 Manx from his Uncle Ko, somehow managed to get it into his fourth story walk-up in Rotterdam, Holland, took it apart, reassembled it, and documented the process on the SolidWorks program. The book (self-published and available from the author) contains a digital rendering of all the assemblies on the motorcycle, with factory part numbers and helpful advice.

Mike enjoys a ride in front of the San Francisco skyline.

Back together

Eventually, the International was back in one piece, with the engine as it would have been shipped to San Francisco, including a 9.3:1 compression ratio to suit the gasoline available in the U.S. It also has some internal improvements and a few external ones. Ian Bennett supplied roller rockers, which are quieter, reduce cam wear and require much less oil. Commando fork internals are a vast improvement on the 1948 version of Roadholder telescopics, which had a minimum of fork damping. Stainless steel spokes don't rust. An AMC clutch fits nicely in the cases and doesn't drag.

Mike also substituted a Monobloc Amal carburetor for the stock Amal TT mixer in order to simplify the initial start-up and break-in. Monoblocs are meant for the road, have an air cleaner, and have provision for a good idle. The tail light is also not standard. The stock unit is the size of a fifty cent piece and

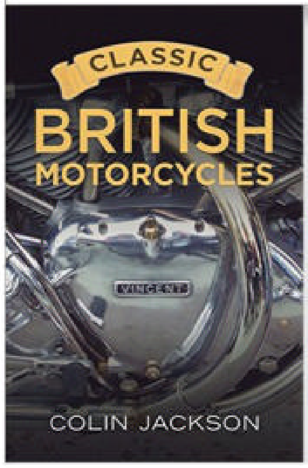


probably not safe for today's traffic. The one on the bike is there because Mike liked the Buck Rogers look. The 8-inch front brake is from a later version of the International, replacing the stock 7-incher.

"It started in December 2020 on the fourth kick. It has a manual advance, and once I backed off the advance a little it started right up." Unfortunately, what also started up was oil leaks. "It's difficult to make an International oil tight. The rockers are not entirely enclosed." Mike worked on the leaks and started taking the bike on longer rides. He now thinks the leaks are fixed — for now. One item that is not fixed is the wet sump problem. Internationals tend to "wet sump," meaning oil drains from the tank to the bottom of the engine as the bike sits, often leaking onto the floor and making the bike hard to start. It is possible to put a turnoff valve in the oil feed line, but many owners of bikes with turnoff valves forget to turn the oil feed back on, with disastrous results.

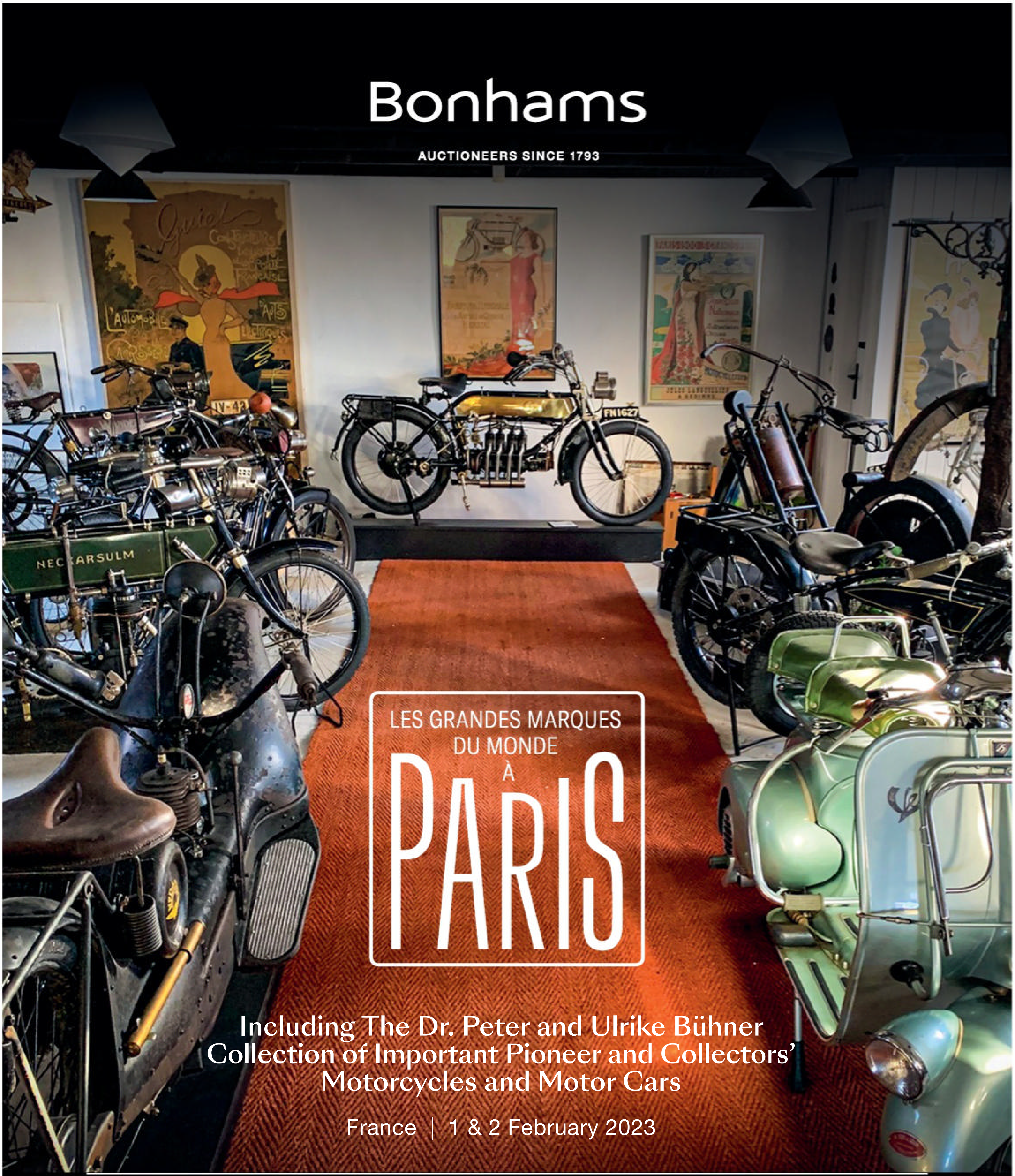
Although big singles are often difficult to get running, Mike says that this International is a "piece of cake to start, with a quick carb tickle, the proper spark advance, and the judicious use of the compression release." Once underway, "It shifts slowly and deliberately, but revs freely and briskly accelerates. The new clutch does not drag. It's so old, I am surprised how quick it is. The handling is not bad over 50mph, but the rear springs are stiff, and the ride is pretty harsh for my old bones. It takes getting used to. The bike also stops reasonably well, but riding through traffic is no fun. In order to really enjoy this bike, you have to adjust your expectations and get out to the countryside."

"The best thing about the whole project was all the people I met trying to run down parts and services. When I was working, I worked on Ferraris, Maseratis, Alfas and some pretty obscure machinery. I used all the things I learned and tried to do as much myself as possible. Without the help of my friends and workmates, the old beast would still be a heap of parts hiding out in the depths of my basement." MC



Classic British Motorcycles

Until the 1950s, and even into the '60s, British manufacturers such as Scott, Rudge, BSA, Norton and Vincent ruled the industry. These legendary companies sold their bikes around the world, winning racing championships and setting speed records as they went. They, and many smaller, British firms like them, are motorcycling's founding companies. This is the story of those pioneering firms, whose engineers, many self-taught, were driven by racing ambition, commercial rivalry, patriotic duty and, above all, a passion for innovation. Superbly illustrated with more than 150 color pictures, many previously unpublished, *Classic British Motorcycles* is a captivating and highly informative account of the men, machines, race meetings and world events that shaped the development of the motorcycle from its bicycle origins. This title is available at store.MotorcycleClassics.com or by calling 800-880-7567. Mention promo code: MMCPANZ5. Item #7758.



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RAYBORN'S RACER

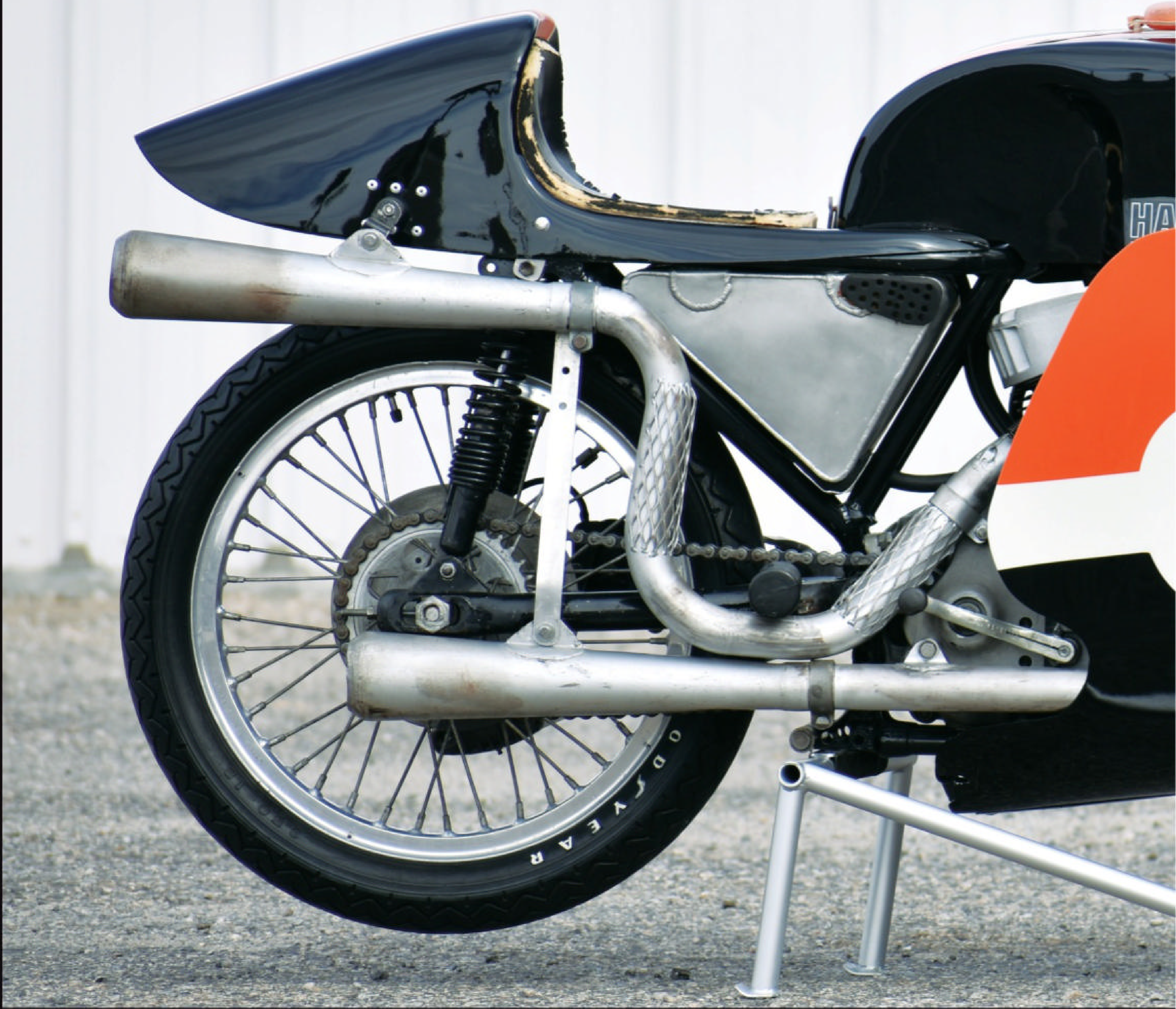
Harley-Davidson KRTT

Story and photos by Dain Gingerelli

By 1950 motorcycle enthusiasts were beginning to wonder if the Harley-Davidson Motor Company was ever going to fully engage the 20th Century. After all, Harley still offered a model powered by an aging flathead engine that was linked to a 3-speed transmission … with a hand shifter.

By then many progressive companies offered models powered by overhead-valve engines coupled to foot-shift 4-speed transmissions. For the time that was front-line technology.

Then in 1952, as if slowly yawning while emerging from a peaceful winter slumber, Harley-Davidson revealed its new K Model, featuring — drum roll, please — foot-shift and a unit construction engine in which the transmission shared the same confines as the engine's lower end. Even though the K Model still featured side-valve combustion chambers (aka, flathead), the new K Model 743cc (45 cubic-inch) engine was a breakthrough design for the American brand. The following year future NASCAR driver Paul Goldsmith won the Daytona 200 — still run on the fabled Beach Course — aboard a KRTT model, Harley's race-ready version of the K Model.



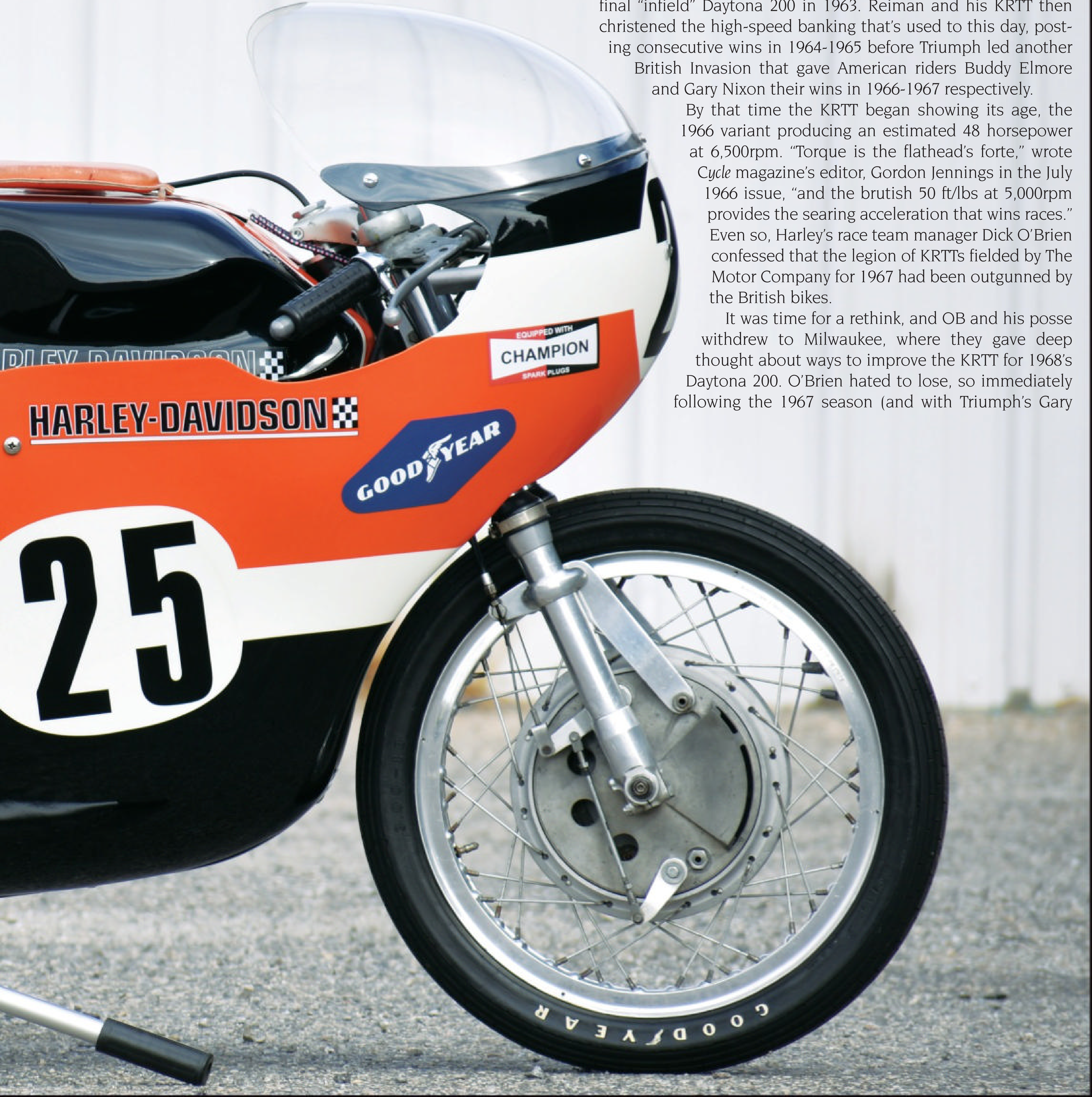
Beachfront property

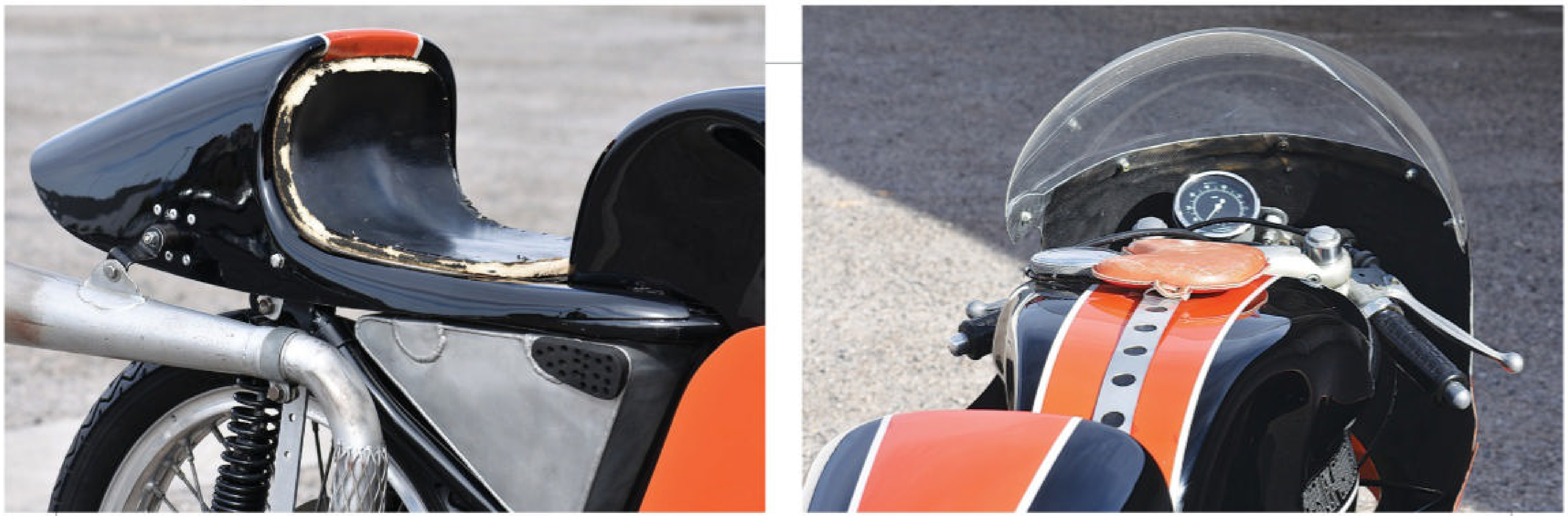
A dynasty, of sorts, was in the making as KRTT riders won seven more Daytona 200s on the original beach course before racers migrated to the new and modern Daytona International Speedway in 1961, with race action restricted to the track's infield portion only. AMA officials insisted on bypassing the daunting 31-degree, 20-feet high, banking for fear the parabolically shaped asphalt would promote speeds too dangerous for the motorcycles' tires and brakes. (Welcome, again, to the 20th Century.)

Even so, the hard pavement suited the KRTT's bullish power as Roger Reiman gave Harley its first Daytona 200 win on the new paved circuit. The next year Don Burnett scored Triumph's first Daytona 200 win ever, and then Ralph White on a KRTT won the final "infield" Daytona 200 in 1963. Reiman and his KRTT then christened the high-speed banking that's used to this day, posting consecutive wins in 1964-1965 before Triumph led another British Invasion that gave American riders Buddy Elmore and Gary Nixon their wins in 1966-1967 respectively.

By that time the KRTT began showing its age, the 1966 variant producing an estimated 48 horsepower at 6,500rpm. "Torque is the flathead's forte," wrote *Cycle* magazine's editor, Gordon Jennings in the July 1966 issue, "and the brutish 50 ft/lbs at 5,000rpm provides the searing acceleration that wins races." Even so, Harley's race team manager Dick O'Brien confessed that the legion of KRTTs fielded by The Motor Company for 1967 had been outgunned by the British bikes.

It was time for a rethink, and OB and his posse withdrew to Milwaukee, where they gave deep thought about ways to improve the KRTT for 1968's Daytona 200. O'Brien hated to lose, so immediately following the 1967 season (and with Triumph's Gary



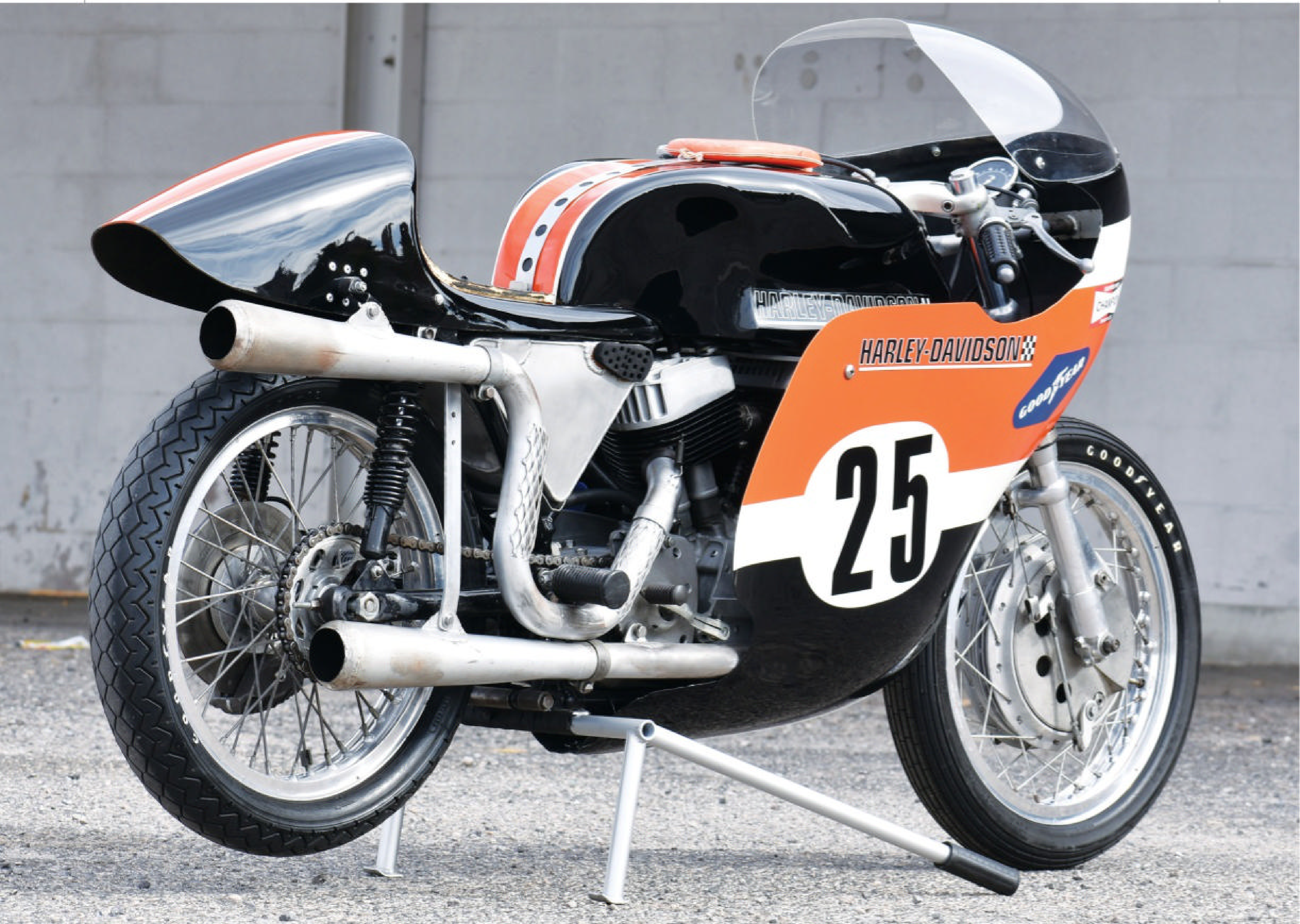


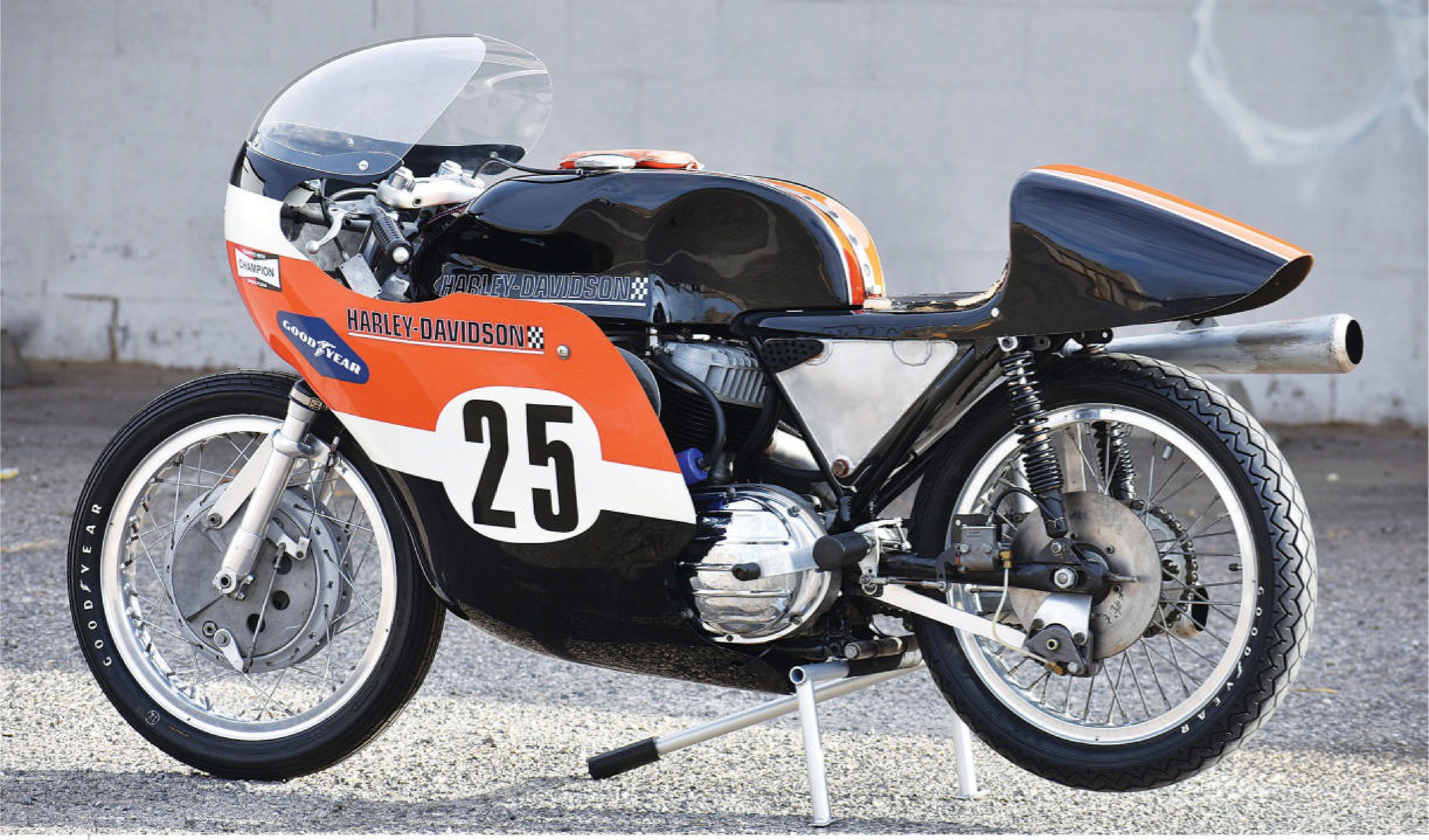
Rayborn's throne was cushioned with Ensolite fabric. Under the fairing bubble sat the tach — all business, minimal luxury.

Nixon the new reigning AMA Grand National Champion, a fact that gave OB fits at night), he confirmed that a squad of seven riders would wear the orange, black and white colors for 1968's 200. The list included Bart Markel (1965 and 1966 GNC), Freddy Nix, Mert Lawwill, Dan Haaby, Walt Fulton Jr., Roger Reiman and Calvin Rayborn.

The 1968 bikes were based on the new Lowboy frame (with a lower steering head and frame backbone) that Harley had pressed into service mid-season in 1967. The frame, crafted by Ralph Berndt, offered less frontal area and a lower center of gravity, creating a more responsive chassis in terms of handling and steering through corners. The chassis included a lightweight H&H rear disc brake coupled with the proven Ceriani 4-shoe 230mm-diameter front brake mounted to a shorter Ceriani telescopic fork. Rear suspension included a pair of Girling rear shocks.

Next, attention shifted to aerodynamics, using a more efficient wind fairing that the Wixom Brothers (Dean and Stan) in Long Beach, California, developed. With assistance from engineers at nearby Cal Tech, Stan and Dean created a more compact and slippery shape that fostered more top-end speed on Daytona's banking. An equally aerodynamic seat was part of the package, and for rider comfort the seat's cushion was made of Ensolite, a soft, resilient vibration-absorbing plastic. The Wixom Brothers also designed a fuel tank formed so that riders could tuck their knees and elbows out of the wind stream. A baffle system inside the tank helped contain fuel slosh during hard braking and cornering.



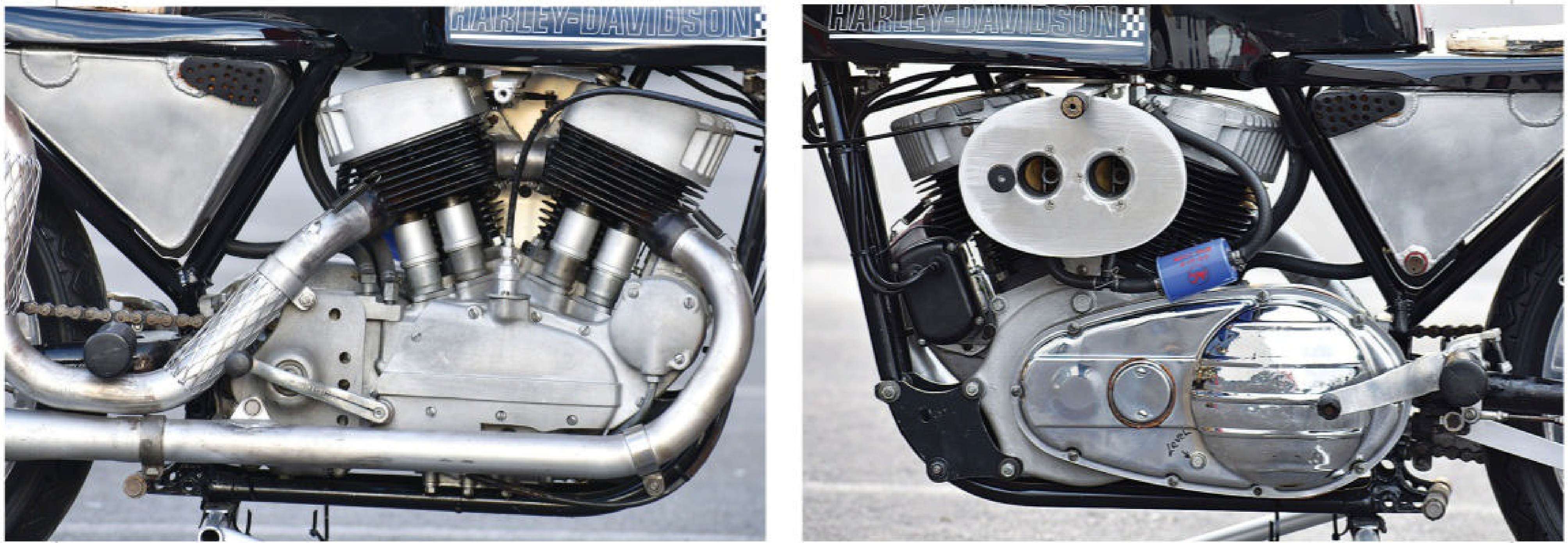


Various fairing designs were tried, with each test session manned by the team's fearless manikin nicknamed Sierra Sam, whose job was to serve as the surrogate rider in the wind tunnel itself. After strapping Sam onto the bike a huge propeller, powered by a Word War I submarine diesel engine, generated wind forces up to 160 miles per hour through the 10-foot-diameter wind tunnel so that engineers could gauge and check the fairing's aerodynamics. Eventually one fairing proved superior to the others.

Throughout, OB and his crew addressed the aging flathead engine itself. Bob Garver, a Harley dealer in Kansas City, developed a new two-carburetor manifold for the 16-year-old engine's intake that carried a pair of diaphragm-controlled Tillotson carburetors. As a bonus, the compact carburetors didn't protrude as much as the single Linkert they replaced, allowing for an even more aerodynamic package.

C.R. Axtell, with prodding from dirt track specialist Neil Keen, discovered additional power lurking within the flathead engine's convoluted intake system. Domed, rather than flat-top pistons supplied by Jahns were matched with some very creative reconfiguring of the combustion chamber's fuel/air flow pattern and revised ports. The combination, matched with Harley's J and K cams, noticeably improved acceleration and top end. As OB told *Cycle World*'s editors just before Daytona Speed Week, the new twin-carb engine clearly outperformed the 1967 single-carb engine, which cranked out 52 horsepower at 7,000rpm to the rear wheel; the 1968 engine also peaked at 7,000rpm but, as OB pointed out, with noticeably more horsepower. How much more he wouldn't reveal, but most rail birds figured that 55, perhaps even more, was certainly the minimum figure.

As usual, the Harleys would roll on Goodyear race tires, and with that matter settled, it was off to Willow Springs Raceway,



CR Axtell and Neil Keen improved the KRTT's combustion chambers, and H-D dealer Bob Garver added the second carburetor.

The bike's "birth mark." The Ceriani front brake and the H&H rear disc brake were rated "excellent" by *Cycle World* editor Ivan Wager.

a nine-turn, high-speed, racetrack nestled deep in California's Mojave Desert, for testing. After numerous fast laps by Rayborn (who, conveniently, resided in nearby San Diego, California), the Daytona-bound KRTT was deemed ready, later confirmed by Reiman's top-qualifying speed of 149.080mph for the 200.

Raceday dawned …

Clearly, much of the off-season work paid off for Harley's KRTT. "The H-Ds were handling very well," wrote Ivan Wager in his *Cycle World* race report, adding, "H-D's new combustion chamber design permitted a more tractable power band." The combination especially suited Rayborn, who applied it early in the race, but only after his — in Wager's words — "semi-crash" during the fifth lap in Turn 1 where the Harley's rear tire lost traction, prompting Rayborn to literally drag his knee for ballast until uprighting the bike so he could carry on as if nothing happened.

But one thing in particular actually did happen: On his way to victory Rayborn lapped the entire field. Actually two things happened — Rayborn also became the first Daytona winner to average over 100mph. 101.29mph, to be precise.

Harley-Davidson had set out to win the 1968 Daytona 200, and their success was a textbook example for every schoolboy to follow — do your homework and you'll succeed.

Shortly after Rayborn's domination at Daytona Speedway Ivan Wager was invited to sample the winning KRTT for *Cycle World* at Riverside International Raceway in Southern California. Wager's first observation included a close examination of the Harley's Goodyear tires that had been scuffed mercilessly along their edges, leading the desk jockey to write that there was noticeable scuffing "on the sidewalls for at least an eighth-inch farther [up] than the last rib. From these indications, it is obvious that Calvin was earning time from good riding, rather than brutal treatment of his machine."

Wager also noted that the flathead engine pulled strongly from 4,500-7,000rpm, further stating "acceleration is strong (boy is it strong): however, there is sufficient flywheel effect to give the rider the feeling that everything wants to go from the rear tire to the road."

Based on the bike's speeds at Daytona, coupled with his seat-of-the-pants experience at Riverside, Wager figured the KRTT engine produced about 56 horsepower. Moreover, "braking is excellent," and handling was "truly first rate."

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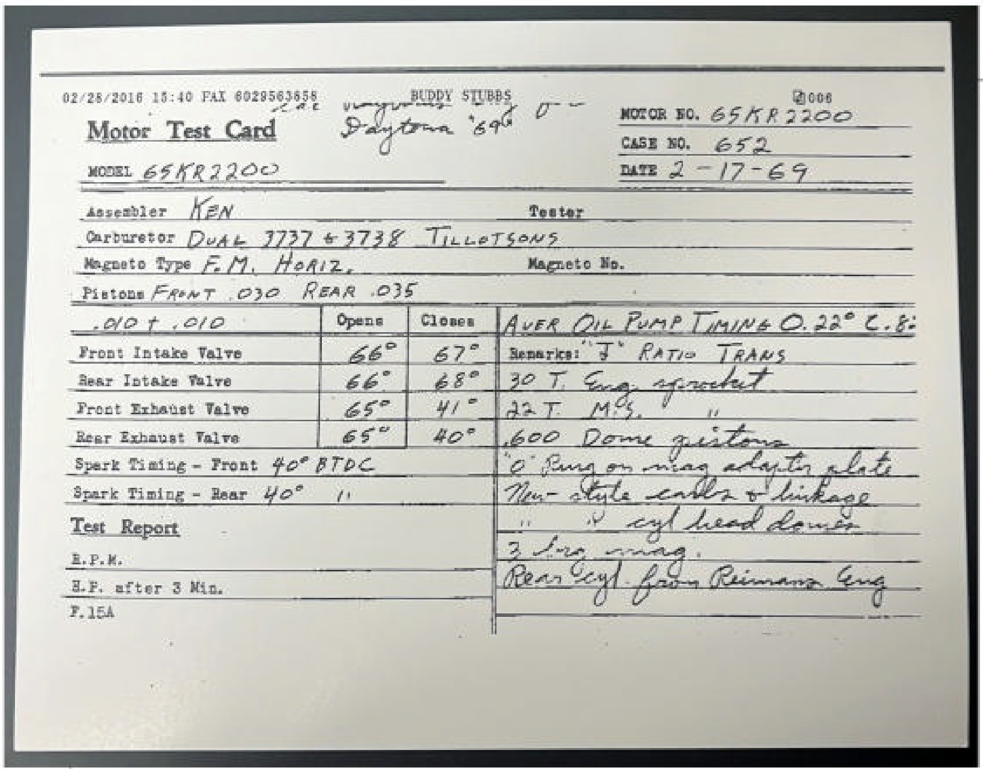
GOODYEAR

Daytona 200, 1969 — Harley's last first

Of the original seven Harley team bikes entered in the 1968 Daytona 200, only one finished. But that one bike — Rayborn's



02/26/2016 15:40 FAX 6029563658 BUDDY STUBBS 006

Motor Test Card Daytona '69

MOTOR NO. 65KR2200
CASE NO. 652
MODEL 65KR2200
DATE 2-17-69

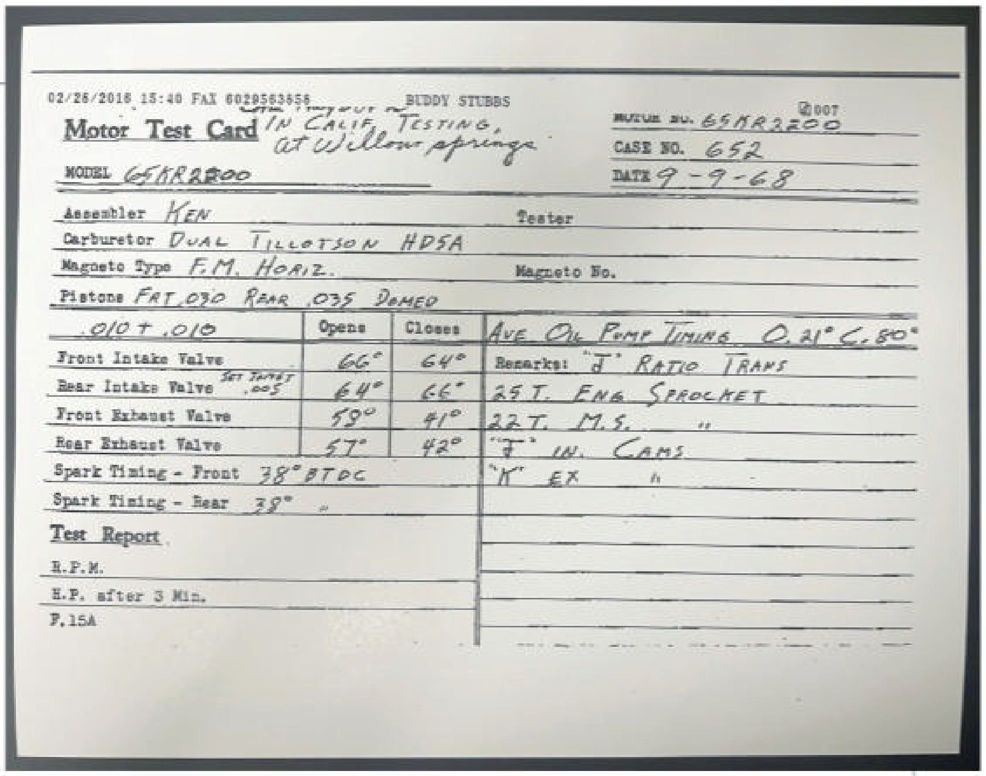
Assembler KEN Tester
Carburetor DUAL 3737 & 3738 TILLOTSONS
Magneto Type F.M. HORIZ. Magneto No.
Pistons FRONT .030 REAR .035

.010 + .010	Opens	Closes
Front Intake Valve	66°	67°
Rear Intake Valve	66°	68°
Front Exhaust Valve	65°	41°
Rear Exhaust Valve	65°	40°

Spark Timing - Front 40° BTDC
Spark Timing - Rear 40° "

Test Report
R.P.M.
H.P. after 3 Min.
F.15A

AVER OIL PUMP TIMING 0.22° C.8
Remarks: "J" RATIO TRANS
30 T. Eng sprocket
22 T. M.S. "
.600 Dome pistons
"O" Ring on mag adapter plate
New-style cables & linkage
" " cyl head domes
3 brg mag.
Rear cyl from Reiman Eng



02/26/2016 15:40 FAX 6029563658 BUDDY STUBBS 007

Motor Test Card IN CALIF. TESTING, at Willow springs

MOTOR NO. 65KR2200
CASE NO. 652
MODEL 65KR2200
DATE 9-9-68

Assembler KEN Tester
Carburetor DUAL TILLOTSON HD5A
Magneto Type F.M. HORIZ. Magneto No.
Pistons FRT .030 REAR .035 DOMED

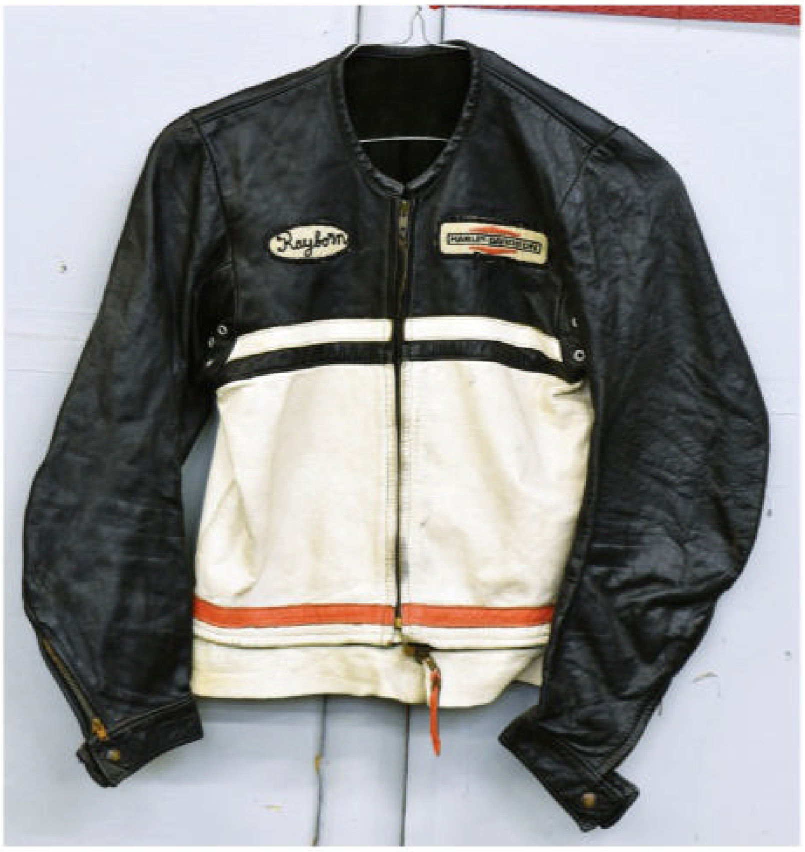
.010 + .010	Opens	Closes
Front Intake Valve	66°	64°
Rear Intake Valve SET TAPPET .005	64°	66°
Front Exhaust Valve	59°	41°
Rear Exhaust Valve	57°	42°

Spark Timing - Front 38° BTDC
Spark Timing - Rear 38° "

Test Report
R.P.M.
H.P. after 3 Min.
F.15A

AVE OIL PUMP TIMING 0.21° C.80°
Remarks: "J" RATIO TRANS
25 T. ENG SPROCKET
22 T. M.S. "
"J" IN. CAMS
"K" EX "

KRTT — finished where it counted most; first place. The other team bikes had either broken or crashed out, leaving Rayborn to share (and enjoy the place of honor — center stage) Victory Circle with Yvon du Hamel and Art Baumann, both on (gasp!) Yamaha 350 2-strokes.



Change was in the wind, and eventually would see 750cc 4-strokes with overhead valves and cams, not to mention a gaggle of new 2-strokes that were unquestionably faster yet unreliable, as evidenced by their shredded rear tires (speed) and frequent engine seizures (reliability). Plus an AMA rule change for 1969 finally allowed 5-speed transmissions; in 1968 the 2-strokes, originally equipped with 5-speed trans, were essentially handicapped because rules allowed only 4-speed trans, forcing the Yamaha and Suzukis teams to remove one gear from their bikes. That changed in their favor for 1969.

All that aside, Harley-Davidson checked in for the 1969 race with their tried and trusty KRTT, now sporting megaphone exhausts, a first for Harley (but still with 4-speeds). The team also boasted Cal Rayborn who, many race experts felt, was probably the best road racer in America, if not the world. And race fans the world over were about to find out if that was boastful bravado or fact because the 1969 Daytona field included several of Europe's top Grand Prix stars.

Yet before Speed Week played out prior to qualifying, the herd of KRTTs proved to be slower than in 1968. More troubling to O'Brien and company was the KRTT's reliability, which was mysteriously questionable at best during Speed Week. A lot of head scratching occurred in the Harley garage as qualifying approached. In the end top-qualifier was Yvon du Hamel and his Yamaha 350 2-stroke at a sizzling 150.01mph; Rayborn was eighth-fastest, but top Harley qualifier, with a speed of 144.76mph.

Rain, rain, go away!

Within a few laps of racing Mother Nature began pelting riders and racetrack alike with raindrops that eventually turned into a deluge. AMA officials decided the intimidating puddles dotting the track's surface posed too much of a danger, so racing was ceremoniously postponed until the following Sunday.

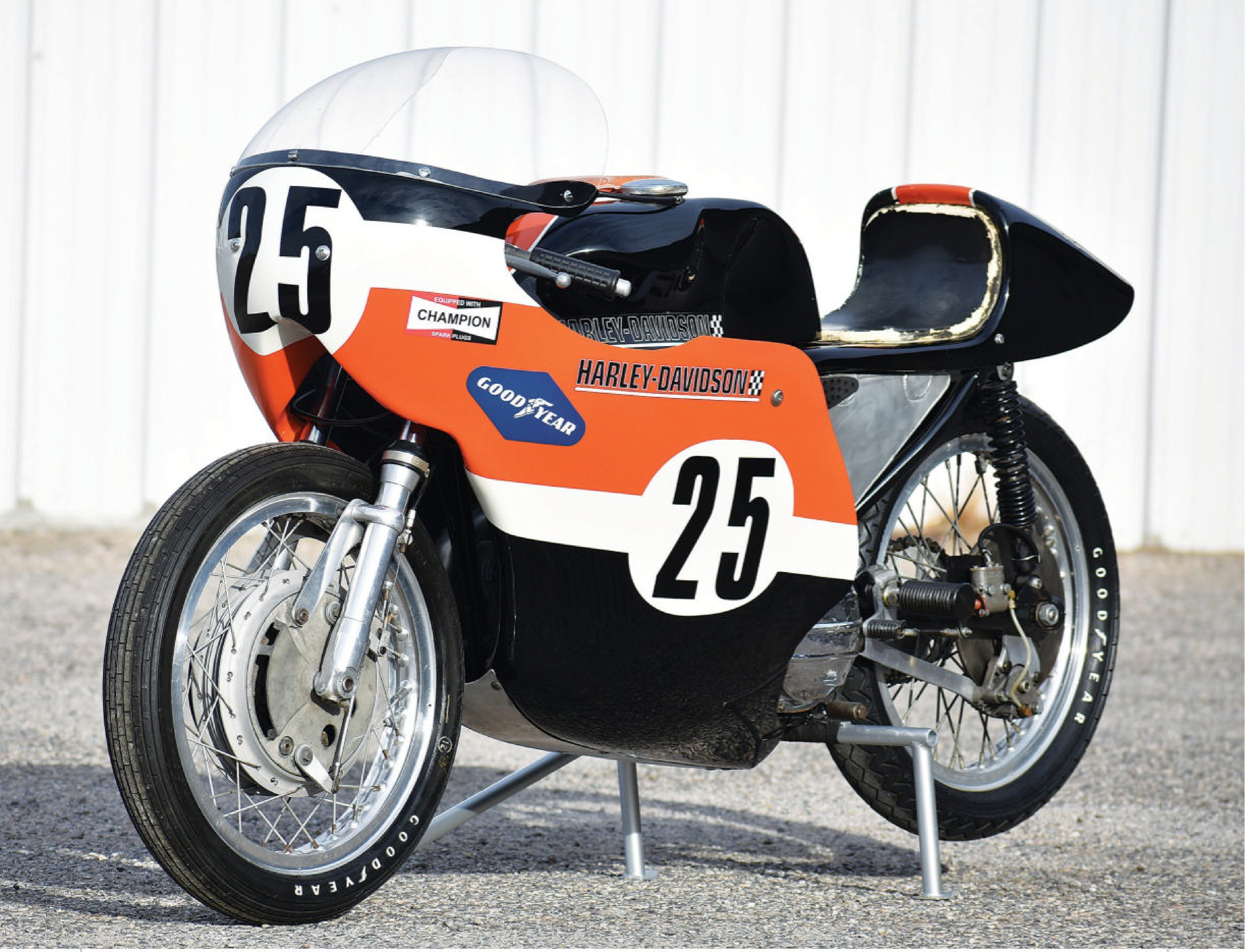
In addition to the KRTT, owner Mike Innuccilli has tracked down original handwritten race notes by team mechanics, plus Rayborn's leathers.

When the track reopened a week later, the Harleys appeared more responsive, and as the race itself proved, more reliable. During the time-out Harley mechanics had rebuilt their engines to thoroughly blueprint their KRTTs' internal parts. Their extra attention to detail proved beneficial, and team bikes were back where OB and the boys felt they should be — up front and in contention.

Eventually, Rayborn won again, doing so in his classic style through hard riding, prompting one magazine to suggest in its race report that he "outlasted a few, outran the rest, and won the 200-miler for … the second time." In addition, Lawwill's fourth-place finish on his KRTT sandwiched a pair of 2-strokes ridden by Ron Grant (second, Suzuki 500) and Mike Duff (third, Yamaha 350), followed by Harley riders Markel in sixth and Haaby in 10th.

Despite those good fortunes, the KRTT was pretty much at the end of its run. In all, Rayborn's Harley won at Daytona, Loudon and Indianapolis in 1968 and Daytona, Heidelberg and Indianapolis in 1969. Yet the KRTT was soon to be replaced by Harley's XR750 that featured overhead valves, among other improvements. Rayborn's first-place at Laguna Seca in 1972 aboard the XR750 proved to be his and Harley-Davidson's final AMA road race National win ever. He would lose his life while racing in an obscure New Zealand road race, riding a Suzuki 500 2-stroke, in early 1974.

And what became of Rayborn's double Daytona winner? As obsolete race bikes go, it was relegated to the back of the race shop, then temporarily loaned to Reiman for some further race action before Harley-Davidson dealer Buddy Stubbs acquired it, with intentions to enter the 1970 Daytona 200. However, his plans got nixed when, at about the same time, his budding dealership gained traction, forcing him to spend more time at the shop



rather than the racetrack.

A short time later Stubbs' friend, the late Stephen Wright (perhaps best known for his authoritative books on American Grand National racing) offered to buy the bike. As the bike's current owner, Mike Iannuccilli, picks up the story, "Stubbs refused to sell it, but Steve told him that everything has a price." Steve talked some more, Stubbs listened some more, and eventually "the price" popped up in their conversation, and shortly thereafter Wright received his new collector's bike, Cal Rayborn's double-Daytona winner. However, by then few people realized, or perhaps appreciated, that this was Rayborn's double-Daytona winner.

Eventually, though, the historic KRTT was passed along to Mark Mahler (as Wright had said, "everything has a price") who later sold it to a collector in Japan. By then nobody in the vintage racing community knew the exact whereabouts of Rayborn's famous KRTT. That included Mike Iannuccilli who had become enamored by KRTT racers in general. But he wouldn't settle for just any KRTT. Mike wanted Rayborn's double Daytona winner. And so Mike began his quest to locate the bike that, as he was to find out later, has an interesting "birthmark" that clearly identifies it as Rayborn's Harley.

The birthmark is found in the engine's number stamping on the left case. According to copious hand-written notes that the Harley race team maintained, the engine wore number "65 KR 2200" that a team mechanic hand-stamped when the flattie engine was enlisted for race duty. Now here's the catch; the stamping is considered a "birthmark" by those familiar with it because the letter "K" is not really a K at all. For whatever reason, whoever stamped it probably didn't have access to a bona fide "K" punch, so he improvised, selecting a "1" punch from the tool box, stamping it into the alloy case to form the vertical left side of the letter; he then juxtaposed the "V" punch, positioning the V sideways in relation to the "1" to form a rudimentary "K" on the engine case. At a glance, or to the unknowledgeable eye, the bogus K looks natural within the entire engine serial number sequence — 65 KR 2200. Hold that thought as we join MIke who begins his search for Rayborn's ever elusive KRTT.

The search continues

Mike told his friend and historian in Texas, Bill Milburn, about his search for Rayborn's Harley, and now there were two pair of eyes on the lookout. The path led to a KRTT road racer in Japan that Bill spotted on a vintage bike website. After further investigation, plus numerous e-mail exchanges with a certain KRTT owner in Japan, they accessed the KRTT's engine number, only to confirm that it wasn't Rayborn's Harley.

Mike exhibits the tenacity of a pit bull when he hunts down his bikes, so eventually he gained the name of another KRTT owner in Japan. Turned out, too, that the owner was interested in selling. Mike eventually obtained a photo of the engine number, plus the assigned numbers found on the bottom sides of each case half. They all matched what Bill knew about the Rayborn Harley,

The Harley-Davidson Motor Co. Archive Collection: A Stunning Display of this Icon's Lineage

THE
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Who knew, over a century ago, that the speed-hungry, cutting-edge motorcycle fanatics who founded Harley-Davidson were making history as well as bikes? *The Harley-Davidson Motor Co. Archive Collection*, showcasing more than 100 years of bikes that shaped motorcycle history, brings that history to gleaming life on page after page of motorcycles beyond compare. Created in cooperation with the official Harley-Davidson Museum in Milwaukee, this book gives motorcycle enthusiasts an opportunity to pore over milestone bikes from the collection, and to linger over every detail that has made Harley-Davidson an icon of American open-road power and performance. With exquisite, detailed photographs and histories of more than 200 motorcycles from Harley's collection, from serial number one built in 1903 to pre-World War II racers to the latest Street Glide, the book captures the excitement of the best-known motorcycles in the world. This title is available at store.MotorcycleClassics.com or by calling 800-880-7567. Mention promo code: MMCPANZ5. Item #10927.

so Mike had the owner send him clear photos of them and the "birthmark" number with its bogus "K". And after careful scrutiny by Bill, Mike received a phone call from his friend in Texas. "That is it," Bill told Mike, and after the usual bargaining, the Rayborn Harley was sent back to America where it joined Mike's growing collection of former championship and champions' race bikes.

Mike contacted Jim Belland to freshen up the engine to its 1969 form. Jim was formerly the H-D race mechanic for Mert Lawwill and Mark Brelsford in the Rayborn Harley era. The original 1968 engine was built by Jerry Foshey and Ken Rehfelt in Harley's race shop, and the following year Rehfelt built the 1969-winning engine. "All hardware and parts are identical to [what was used in] '69," Mike states.

Clearly, the Rayborn Harley is a fine example of Daytona's most famous winners. It, along with many other race bikes that Mike has in his collection, is displayed on a rotating basis at Red Rock Harley-Davidson on the outskirts of Las Vegas, Nevada.

Beyond this KRTT's historical significance, the Rayborn Harley is special to this author because years ago during a phone interview with Dick O'Brien, our topic of discussion drifted to the late Cal Rayborn who, I knew, OB treated like his own son. At one point I inquired if he had any particular Rayborn memorabilia that was especially meaningful to him. OB said that he did — a tribute Rayborn racer that members of Harley's race team had assembled for OB's retirement in 1983. OB's voice drew soft when he added, "And I'm never going to give that away."

Maybe Stephen Wright was wrong — everything doesn't necessarily have a price. If the late Richard H. O'Brien were here today, he'd probably tell us just that about his own Rayborn Harley. In the meantime, and much thanks to Mike Iannuccilli (with Milburn's help), we all can enjoy what has become known as Rayborn's Harley — Daytona's 1968 and 1969 winner. MC

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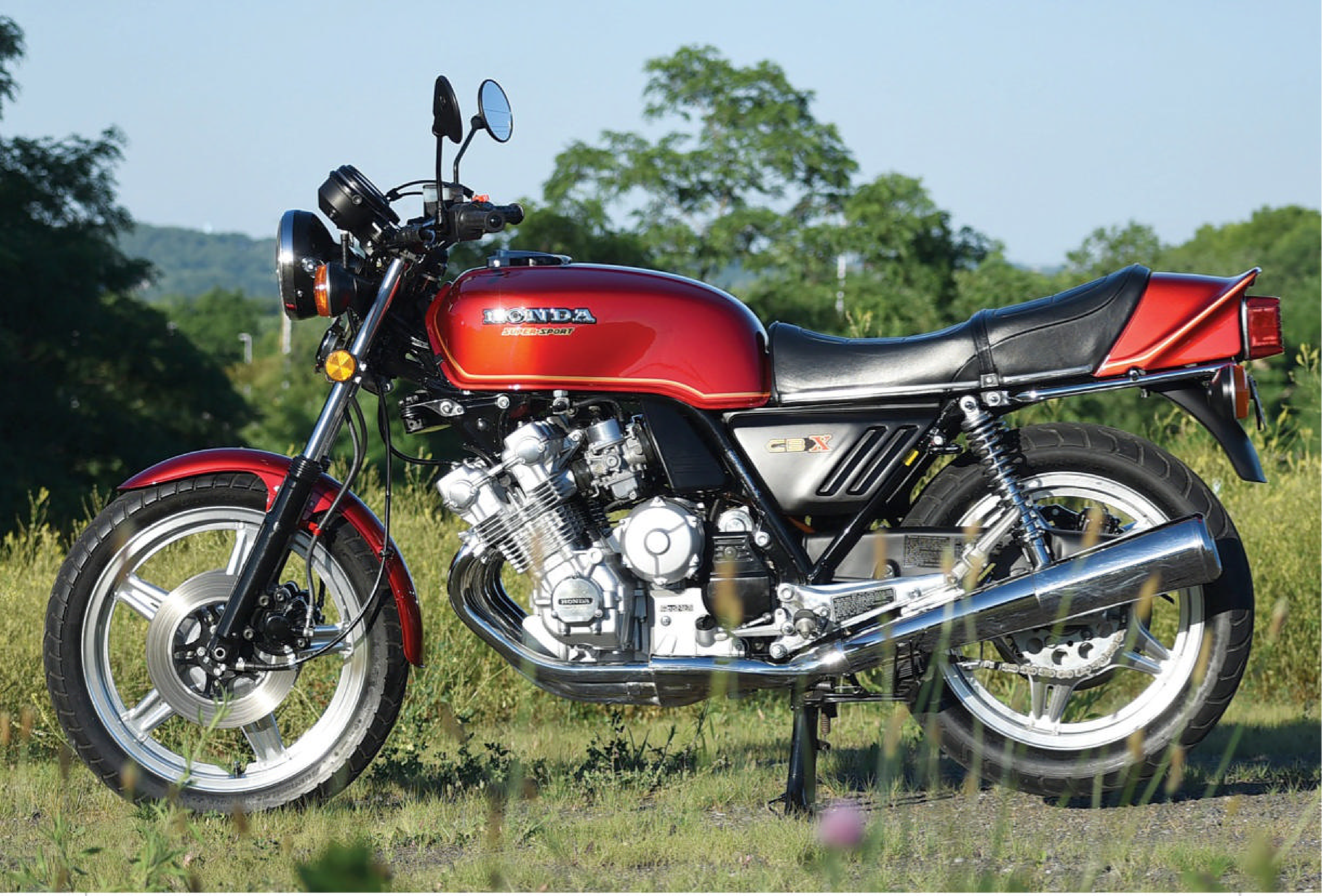


THE SOUND AND THE FEEL

Scott Mercer's 1979 Honda CBX

Story By Greg Williams
Photos by Tressa McCune

"That engine!"

Scott Mercer is referring to the 6-cylinder powerplant found in the legendary Honda CBX. It's a mill that has long fascinated him, but a strong sense of nostalgia also plays a vital role in this story about his 1979 Honda CBX.

It all starts in the early 1970s when Scott's stepdad, Russ, got a once derelict Aermacchi-built 250cc Harley-Davidson on the road again. "It was a non-running machine," Scott recalls of the Aermacchi. "My mom actually paid a shop to put it back together, and he taught me to ride that bike — that launched my motorcycle career. Russ was passionate about motorcycles, and I followed closely in his footsteps."

In 1978, the year Scott graduated from high school, his mom and stepdad bought him a 1972 BMW R75/5. He rode it extensively, but the machine was a little tired so he took out a $1,000 loan and freshened up the BMW's engine and transmission. Sadly, while riding home from AMOL Precision, a motorcycle shop located in Dumont, New Jersey, an errant driver took out the front end of Scott's machine. The bike was totaled. To pay off the loan and accumulate enough cash for a down payment on a new BMW R80/7, Scott worked two jobs for a number of months. AMOL was running a special in conjunction with BMW of North America on the R80/7, and it included the $650 option of a Luftmeister fairing and Krauser bags at no extra cost. Scott says he jumped on that deal, but shortly after his purchase Russ arrived home on a brand new 1979 Honda CBX in Candy Glory Red.

"I was gobsmacked by the CBX," Scott says, but adds he

Does it appear imposing? In fact, the CBX 6-cylinder was only 40mm wider than Honda's CB750 4-cylinder.

couldn't afford the $4,000 price tag of the Honda so continued riding his BMW. "We would ride to BMW MOA National Rallies, me on the R80/7, my mom on her Honda CB400A Hondamatic and Russ on his CBX, with that engine!"

Fast forward to 1983. "By this time, I'd read that Honda had leftover CBXs sitting in dealer warehouses because they couldn't sell them," Scott explains. "So, I managed to source a brand new, in the crate, zero mile, '79 CBX in Perseus Silver from Honda Mineola Long Island for $2,850. It was a four year old, brand new machine." By this time married with a young family, Scott says life was humming along and he enjoyed riding the CBX but he began hankering for something a little sportier. In 1991, he sold the CBX with 11,000 miles on the clock and replaced it with a Kawasaki ZX11. Perhaps that was just a little too sporty. "I was a young fool and I was going to kill myself on that thing, so in 1992 I bought a BMW R90S in Daytona Orange."

From BMWs back to the CBX

After that, Scott's motorcycles were mainly BMWs but his interest in the CBX never really waned. For close to 20 years, he kept track of the CBX market and says about 10 years ago he reached out to TIMS CBX (Tim's International Motorcycle Supply) in Georgia expressing an interest in purchasing a restored Honda. His timing wasn't good then, but about a year and a half ago, Scott reached out again to TIMS with the intention of buying a CBX.

"A 1979 CBX in Candy Glory Red out of South Carolina had just come in on consignment," Scott recalls. "It had been restored five years earlier by TIMS, and the owner had put only 500 miles on it. He wanted to move it; we agreed on a price and I had it shipped here to my home in Pennsylvania."

Upon delivery in September 2021, Scott was pleased with his purchase and put a few miles on the CBX, but says he wanted to go just that much further with the bike to make it the Honda he remembered from the early 1980s. "I embarked on a journey to make it exactly what I envisioned and remembered of those early CBXs," he says.

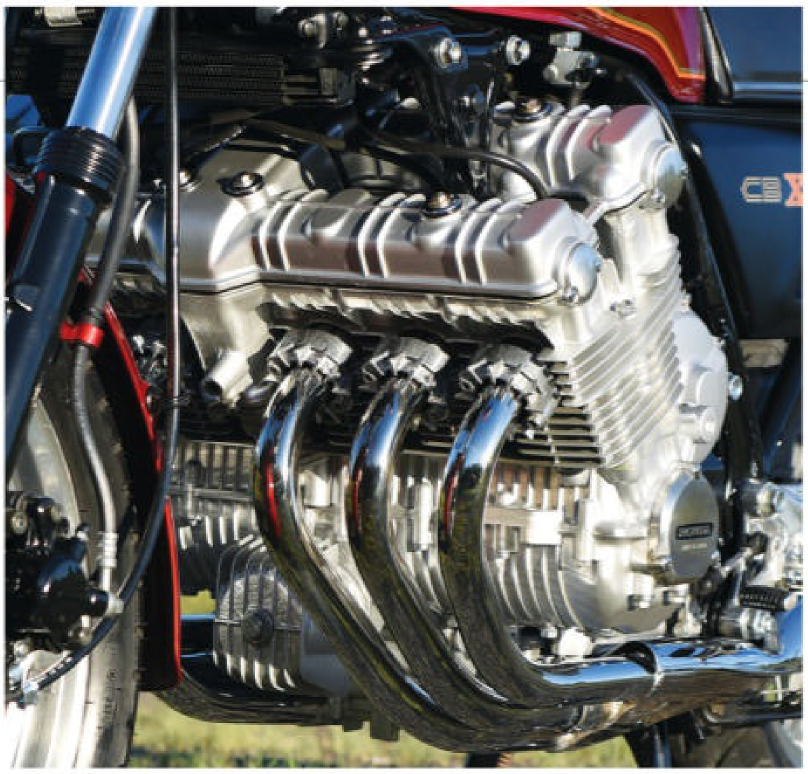
Looking back

Introduced to journalists late in 1977 in prototype form, Honda's CBX was something completely different in the motorcycle marketplace. "Even in the age of superbikes, nobody could believe it when Honda unveiled the CBX Six," notes a review of the bike in the January 1979 issue of *Cycle World*. "More cylinders, more camshafts, more horsepower, more speed, more acceleration, more more. It was the fastest, quickest, flashiest, most head-turning two-wheeled street vehicle ever seen." In 1978, when *Cycle World* tested a prototype CBX, the magazine proclaimed the model was the fastest motorcycle it had ever tested. In 1979 production trim, the CBX was even faster, clocking an 11.36 second run down the quarter mile at 118.11mph.

And it had every right to be fast. The CBX project leader was Shoichiro Irimajiri, who, in his mid-twenties, drew up GP racing 6-cylinder engines in 250cc and 297cc capacity. He was also the mastermind of a twin-cylinder 50cc engine with a 23,000rpm redline and a 125cc 5-cylinder. Irimajiri was quoted in the February 1978 issue of *Cycle*. He said, "When we were racing, we were up against the 4-cylinder 2-strokes built by Yamaha and Suzuki. Cylinder multiplication was the only way we could be competitive. That's why we built the Five, and the two Sixes." He continued, "The CBX-Six is a direct descendant of those race engines."

1979 HONDA CBX

Engine: 1,047cc air-cooled DOHC 4-stroke 6-cylinder, 64.5mm x 53.4mm bore x stroke, 9.3:1 compression ratio, 103hp @ 9,000rpm (at the crank, 85.5hp at the rear wheel)
Top speed: 136mph
Carburetion: 6 Keihin 28mm CV
Transmission: 5-speed, constant mesh, chain final drive
Electrics: Battery-powered solid state CDI, 12-volt alternator
Frame/wheelbase: Tubular w/engine as stressed member/58.9in (1,495mm)
Suspension: Telescopic front fork, swingarm rear
Brakes: 10.8in (275mm) dual disc front, 11.8in (300mm) single disc rear, all single-piston calipers
Tires: 100/90H19 front, 130/80H18 rear
Weight (half tank fuel): 580lb (263.1kg)
Seat height: 32.9in (836mm)
Fuel capacity: 5.3gal (20.1ltr)
Price then/now: $3,998/$8,000-$25,000



Cycle World said the CBX offered "More cylinders, more camshafts, more horsepower, more speed, more acceleration, more more."

Honda's 1,047cc CBX 6-cylinder powerplant featured twin overhead camshafts and four valves per cylinder. The manufacturer was proud to announce those last two facts on a tank-top decal, declaring the CBX 6-cylinder was a "Double Overhead Cam" and had "24 Valves." Bore and stroke was 64.5mm by 53.4mm with a 9.3:1 compression ratio. Each cylinder got its own 28mm Keihin CV carburetor and an impressive 6-into-2 exhaust system handled spent gases. To keep the engine relatively narrow, ancillary components such as the ignition system and alternator were mounted behind the engine's cylinders instead of at the ends of the crankshaft. Compared to Honda's CB750 4-cylinder, the CBX's 6-cylinder engine wasn't much wider, measuring only 40mm broader.

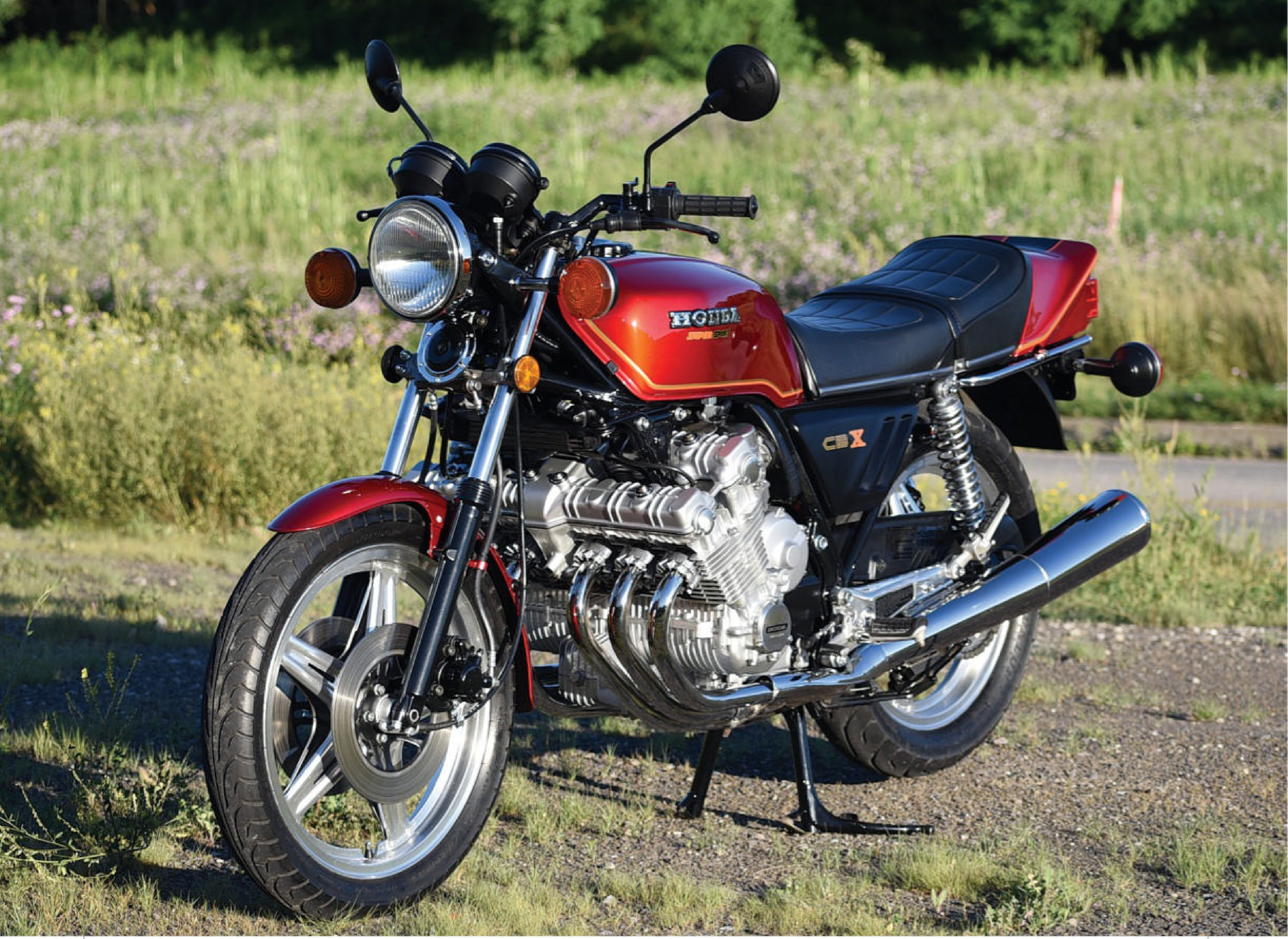
All six cylinders were canted forward and the engine acted as a stressed member in the tubular steel frame. Front suspension was telescopic fork and, for the first two years of production, twin rear shocks provided rear suspension. Rolling stock

consisted of aluminum 5-spoke wheels, a 19-inch rim up front with twin disc brakes followed by an 18-inch hoop out back with a single disc. Although Honda employed weight-saving materials throughout the CBX, according to the January 1979 *Cycle World* test the machine still tipped the scales at 580 pounds with half a tank of gasoline.

Honda's CBX was intended to be a sporting motorcycle, and for the 1979 and 1980 production years that's how the machine was marketed. The 1980 models gained air adjustable forks and the twin rear shocks also became adjustable. For 1981 and 1982, the CBX took on a different persona as a sport touring motorcycle. The engine was slightly detuned using altered camshaft profiles to put more usable power in the midrange. Suspension was changed to a single shock Pro-Link rear and the fork tubes were made beefier, as were the brakes. Honda took some flex out of the chassis tubes and strengthened the frame. Topping off these changes, Honda installed a wind-cheating fairing and a pair of saddlebags.

In his Retrospective column, moto-journalist Clement Salvadori noted in the October 1996 issue of *Rider* magazine

Radiant and resplendent in Candy Glory Red over that impressive engine and its set of 6-into-2 headers.



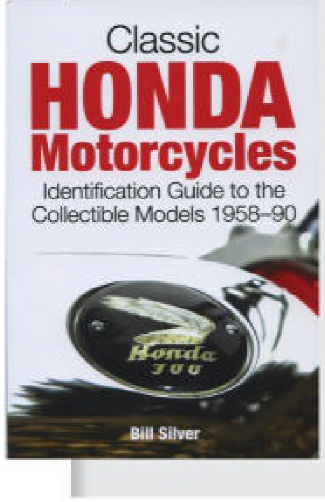
that the CBX did “Everything well … except sell. Somehow it did not strike a chord in the hearts of motorcyclists. Everyone admired it, everybody wanted to ride it, but few people were buying it.” Even after the redesign, turning the CBX into a sport-touring model, Salvadori says the bikes just weren’t selling and 1982 was the last of Honda’s 6-cylinder CBX.

“The frame is not terribly robust,” Scott says of the early CBXs, “and the forks (with 35mm tubes) are spindly, too. But the bike has an incredibly sporty nature, once the engine hits 6,000rpm it really scoots and the package is very smooth, and very comfortable.”

Dialing it in

About a week after he got his new-to-him Honda 6-cylinder nostalgia machine, Scott asked a CBX-knowledgeable friend to help make a few changes. “He agreed to take it apart and scrutinize everything for Honda factory accuracy,” Scott explains. Once completely dismantled, it was discovered the engine case was from a slightly later CBX. To make it more correct, an engine case made the same month as Scott’s frame —identifiable through serial numbers — was sourced and all parts were swapped. All of the motorcycle’s nuts and bolts were cleaned and re-plated. Aftermarket rear shocks were swapped out for a pair from Honda.

To bring the instrument cluster up to his standard, Scott sent the gauges, which include speedometer on the left, tachometer to the right and voltmeter in the middle below the larger dials, to CBX Performance in Costa Mesa, California



Classic Honda Motorcycles: Identification Guide to the Collectible Models, 1958-1990

Honda made its mark on the motorcycle world with small, affordable bikes, and grew well beyond that to create some of the most important performance machines ever built. This guide to the collectible Hondas gives prospective buyers a leg up on the current market for groundbreaking classics like the CB77 Super Hawk, CB92 Benly, Dream 300, CB750, CB400F, as well as 1970 to 1979 models that are quickly becoming classics in their own right. Photographs of the models are accompanied by complete descriptions of specifications, components, paint codes and serial numbers. A five-star rating system rates the bikes on collectability, parts availability, two-up touring compatibility, reliability and power. The author also highlights common repair and restoration needs, and looks ahead at future collectible models. This title is available at store. MotorcycleClassics.com or by calling 800-880-7567. Mention promo code: MMCPANZ5. Item #6428.

Scott Mercer was "gobsmacked" when he first saw his stepdad's CBX in 1979 — this one is in tribute.

(cbxperformance.com). There, the instruments were taken apart, cleaned and lubricated, calibrated and finished off with what CBX Performance describes as "exact reproduction faceplates" that "are NOT a cheap sticker or decal, but an actual replacement plate virtually identical to the OEM plate."

With the CBX's dash looking brand new, Scott managed to source brand new handlebar switchgear to add to the lower handlebar that's part of Honda's highly desirable Sport Kit. This kit came with shorter cables for clutch and choke and the throttle housing was different, too, with cables originating from the top rather than the bottom. Scott's CBX also has the Sport Kit's rear set controls with different footrests and gear shifter linkage. The paint on his CBX, in the Candy Glory Red that Scott remembers of his stepdad's bike, was done very well and needed no attention. With all revisions to the CBX being done over the winter, Scott's machine was returned to him in April 2022.

"By old bike standards," Scott explains, "it's a breeze to start. Put the key in the ignition, but don't turn it on. Turn the petcock on, open the throttle several times, put the choke on, turn ignition on and hit the start button. It fires up every time." He's added about 800 miles to the odometer since its refurbishment, and while it's not a daily rider, he concludes, "It is a cream puff motorcycle that I want to work, because I want to be able to ride it and I thoroughly enjoy it. The sound, the feel, the acceleration, that engine, it all brings to me instant memories of my first '79. And it really is an ode to my stepdad, Russ, that I have this bike." MC

Returning the CBX to the road in the spring of 2022, Scott's been out riding and adding on miles.

URBAN WARRIOR

Royal Enfield Scram 411

Story by Alan Cathcart
Photos by Oli Tennent

A key path to profitability in the global motorcycle industry is to produce as many different variations on a theme as possible, by using the same essential mechanical platform to spawn differing but distinctive models appealing to diverse customer groups.

Obvious, maybe — but few companies have been as adept at this, and in such volume, as Royal Enfield, and the new Scram 411 urban hot rod derived from its Himalayan ADV/adventure bike is the Indian company's latest proof of this expertise — and all on its usual affordable basis for Western customers.

Royal Enfield built its first motorcycle in 1901, which 120 years onwards makes it the world's oldest bike brand to have maintained unbroken production throughout its life, with its recently superceded 350/500cc OHV Bullet models continuously manufactured for 90 years, ever since the first model bearing this name debuted in 1931. Indeed, there had been only occasional updates to the same essential Bullet pushrod platform since 1948, when it was chosen as the motorcycle to equip newly independent India's Armed Forces post-Partition, before it was phased out of production in 2022, as part of owner Eicher Motors comprehensive ongoing update of its range. Despite including the tail end of the Covid pandemic, global RE sales in 2021 amounted to 600,888 units, up 11.9% vs. 2020 while still well down on the all-time record year of 846,000 motorcycles in 2018 — and that despite a seven-week strike at its ultra-modern Oragadam main plant outside Chennai (Madras). See what I mean about volume?

New beginnings

In March 2016, as step one in its modernization overhaul, Royal Enfield tore up the vintage-era template for its ongoing success story, by introducing the Himalayan 400 — albeit at first in carburetted form only for its Indian home market and Australia. Powered by the company's first-ever overhead-cam engine, and housed in a similarly unique monoshock chassis, it shared no parts with any preceding Royal Enfield model. In launching it, Royal Enfield's dynamic CEO Siddhartha Lal was attempting to carve a new dual-purpose niche sector in the Indian market — one that rival company Bajaj Auto had stayed well clear of, despite its tie-up with the world's leading off road manufacturer, KTM. For despite the awful state of Indian roads outside the main cities — and in them, too! — local riders had refused to embrace Street Enduro or Adventure Touring motorcycles complete with long-travel suspension when they'd been

ROYAL
ENFIELD
RAM 411
GRIPP-XLF
CEAT

ROYAL ENFIELD SCRAM 411

Engine: 411cc air-cooled 4-stroke single cylinder, 78mm x 86mm bore and stroke, 24hp @ 6,500rpm, 23.6lb/ft @ 4,250rpm, 9.5:1 compression ratio
Top speed: 90mph
Fueling: Electronic fuel injection
Transmission: 5-speed
Electrics: 12v, digital electronic ignition
Frame/wheelbase: Half-duplex split cradle frame/57.3in (1,455mm)
Suspension: 41mm telescopic front forks, monoshock rear
Brakes: 11.8in (300mm) disc front, 9.5in (240mm) disc rear
Tires: 100/90 x 19in front, 120/90 x 17in rear
Weight (dry): 408lb (185kg)
Seat height: 31.3in (795mm)
Fuel capacity: 3.9gal (14.7ltr)
Price: $5,099

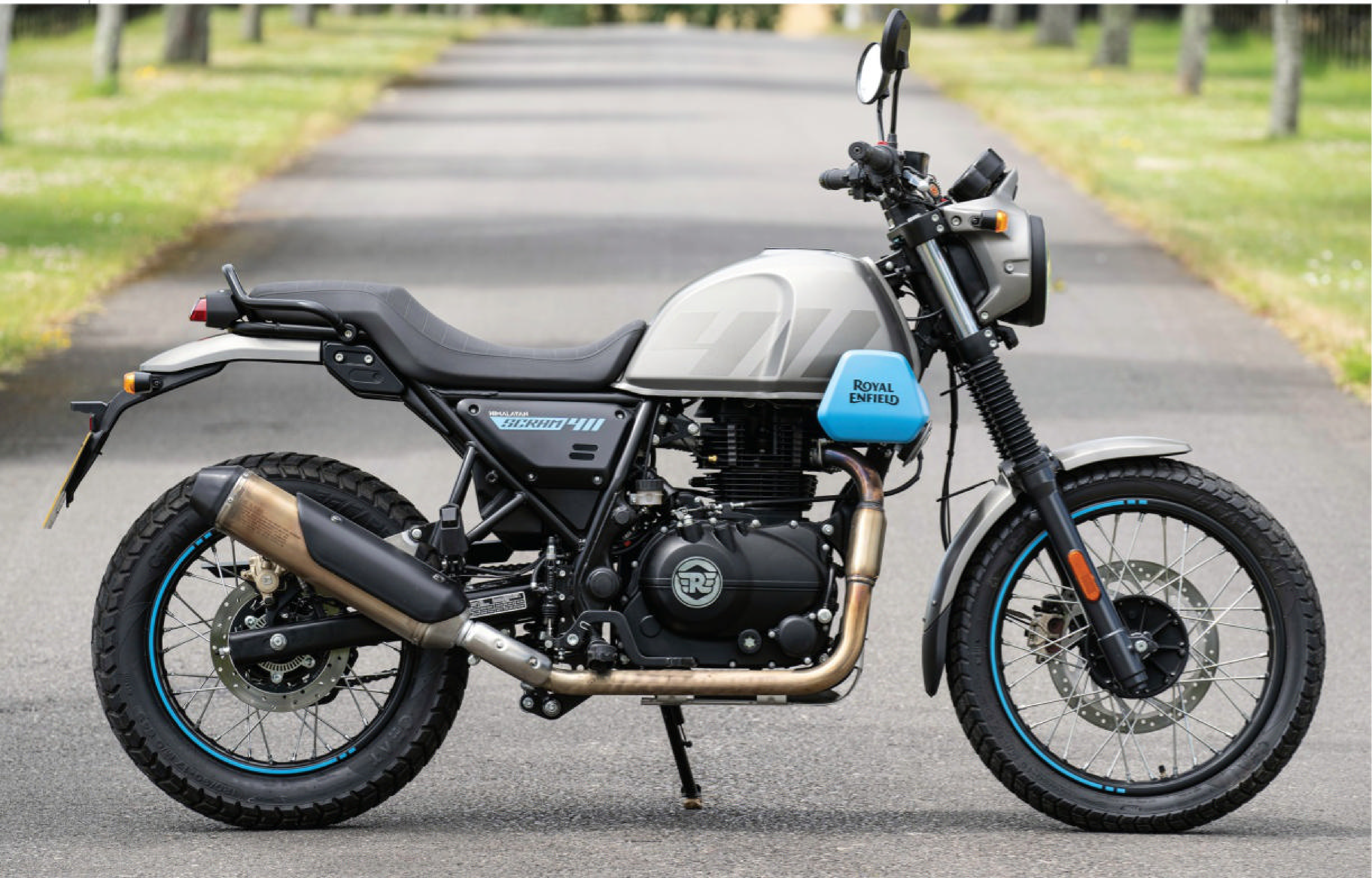
Disc brakes front and rear are aided by ABS. The right dash pod also displays Tripper navigation.

offered to them — until then.

For thanks to some canny advertising and social media momentum, not to mention word of mouth once owners began receiving deliveries, Royal Enfield soon found it had a hit on its hands in the Himalayan, thus justifying Siddhartha Lal's gamble to "try something different," as he put it in an interview we did together soon after the Himalayan was launched. "We want to try to be as innovative as possible within our chosen segment of the market," he said. "We're not building this bike for experts, we're building it for people who want to graduate from a 150cc commuter motorcycle, yet have a passion for adventure and touring. You're going to see a lot more innovative products from Royal Enfield which address the desires of our customers that they maybe haven't even consciously recognized to be what they want, while still retaining our core model range of Classics."

This in turn spawned an interest in the Himalayan from overseas customers, especially Europe and the U.S., for which however RE's engineers had to develop a Euro 4-compliant version for its 2018 debut in those markets that was fitted with ABS and fuel injection. That done, the Himalayan has been a solid sales success in numerous Western countries, headed by the U.K., where it's second only to the BMW R1250GS in overall ADV sales — especially as an A2 license-friendly dual-purpose model whose compliance has now been upgraded to Euro 5.

So having successfully established the functional-looking and slightly retro-seeming Himalayan as an affordable, accessible

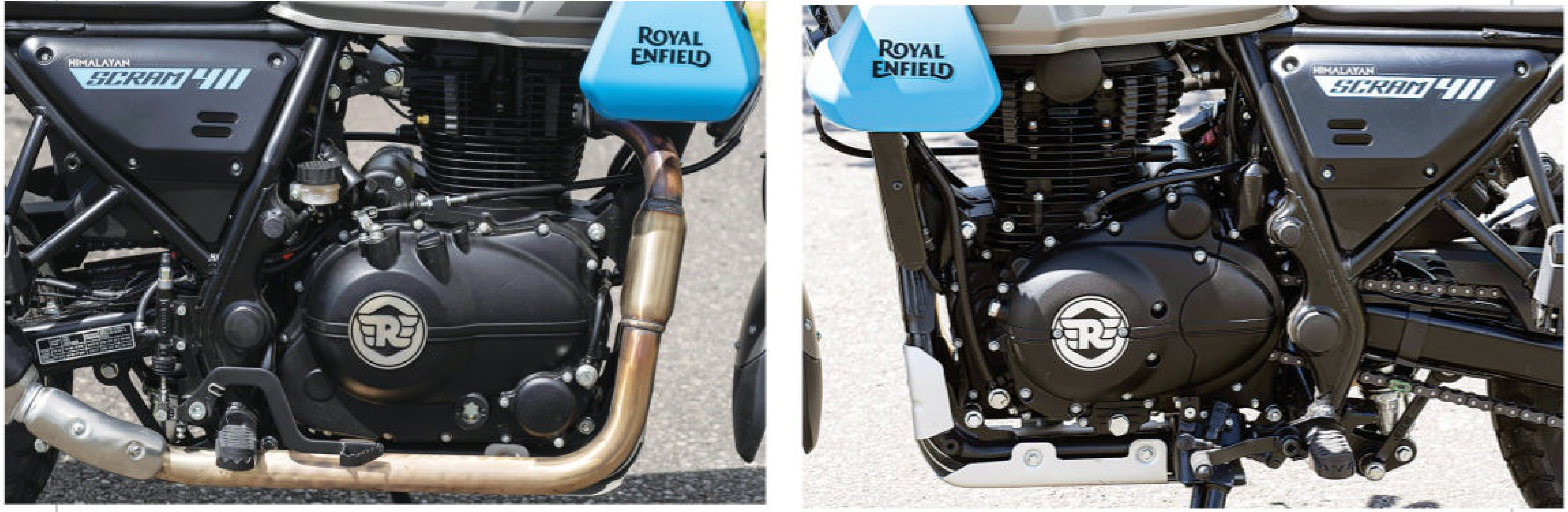


ROYAL ENFIELD
HIMALAYAN SCRAM 411

ADV model appealing to a wide range of customers, as part of Lal's promise to produce "a lot more innovative products," Royal Enfield has now targeted a more style-conscious, road focused market segment with the debut of the Scram 411, now available in U.S. dealer showrooms for a low $5,099 list price in seven paint schemes. This perky-looking urban warrior has splashes of color in delivering a sense of cool, despite adopting the exact same platform as the Himalayan — as denoted by the fact that it carries that name on its side panels, and wears the same off road-friendly tires as its ADV ancestor.

Power up

So the Scram's LS410 air/oil-cooled 2-valve single-cylinder long-stroke engine with chain-driven SOHC and measuring an undersquare 78mm x 86mm for 411cc is identical to the Himalayan's, and according to Siddhartha Lal was specifically designed to accentuate availability at lower revs of its 23.6lb/ft of torque topping out at 4,250rpm, with a good proportion readily on tap before that. Peak claimed power of 24 horsepower is delivered at 6,500rpm and transmitted via a 5-speed transmission with oil-bath clutch. Another key ingredient not found on any previous Royal Enfield engine is the single gear-driven counterbalancer positioned in front of the crankshaft, aimed at resolving the vibration issues of RE's Classic pushrod singles. Service intervals are an extended 6,000 miles between oil changes, and there's a 3-year unlimited mileage warranty. This first new-generation



The fuel-injected 411cc air/oil-cooled single cylinder engine pumps out 24 horsepower at 6,500rpm.

HIMALAYAN
SCRAM 411
ROYAL ENFIELD

The sidecovers highlight the Himalayan name, as the Scrambler is based on the ADV bike. Cool front headlight nacelle.

Royal Enfield engine was the progenitor of the later Meteor SOHC 349cc single measuring 72mm x 85.8mm which debuted in the 2021 model year, and has now been adopted in the all-new version of the RE 350 Classic, the world's largest selling motorcycle over 250cc in capacity, with around 450,000 units manufactured each year pre-pandemic.

It's installed in what by RE standards is an equally innovative frame, designed in the U.K. by the Indian firm's subsidiary Harris Performance, the British chassis specialist which was purchased by Royal Enfield in May 2015. The Himalayan/Scram's tubular steel twin-loop open-cradle frame was Royal Enfield's first-ever monoshock chassis on debut in 2016, and carries a non-adjustable 41mm leading-axle telescopic fork up front set at a 26.5-degree rake and giving 7.5 inches (190mm) of wheel travel — 0.4 inches less than on the Himalayan, with tauter damping — while out back the tubular steel swingarm works a monoshock that's 5-way adjustable for spring preload, operated by a progressive-rate link giving 7.1 inches (180mm) of travel.

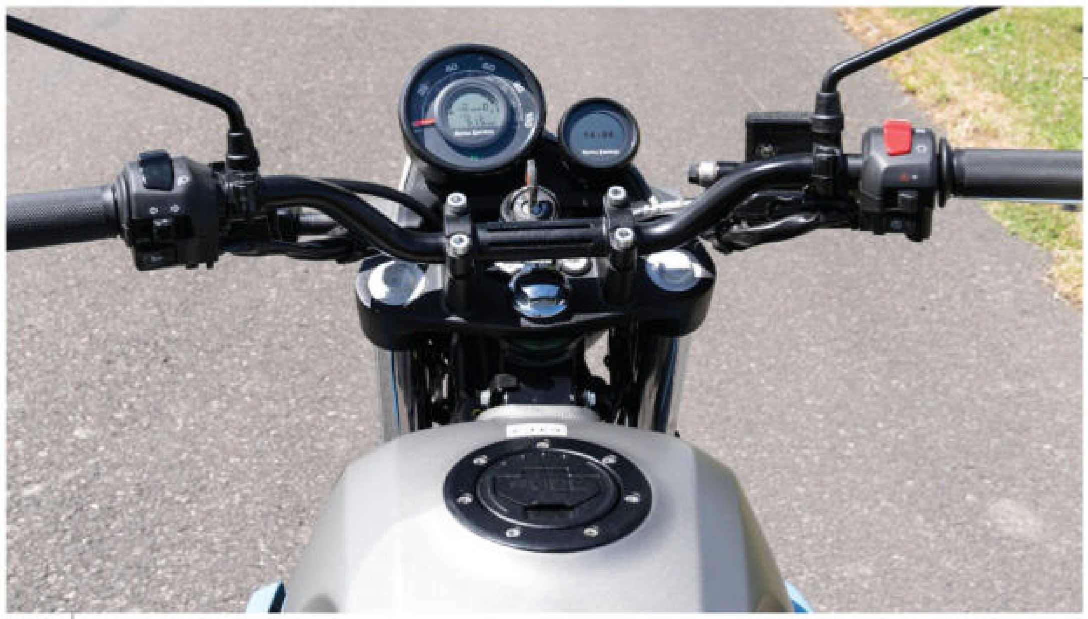
While the suspension is made in-house by Royal Enfield, the Scram's brake package comes from ByBre, Brembo's Indian subsidiary, with a single 11.8-inch (300mm) disc with 2-piston floating caliper up front, and a 9.5-inch (240mm) rear disc gripped by a single-piston caliper. Indian-made CEAT Gripp-XL dual-purpose tires adorn the aluminum-rimmed wire-wheels, but unlike the Himalayan's 21-inch front wheel, the Scram has a 19-inch hoop with a 100/90 tire, which in turn reduces the wheelbase 0.4 inches (10mm) to 57.7 inches (1,465mm), while the rear is common to both models at 120/90-17. The Scram weighs a claimed 408 pounds (185kg) with oil but no fuel, so figure a quite meaty curb weight for a 400 single of 432 pounds (196kg) on the road, with a full 3.9-gallon (15ltr) fuel tank offering a claimed range of 280 miles (450km) at 40mpg. It has a seat height of just 31.3 inches (795mm), thus self-evidently appeals to a wide range of riders, especially shorter ones who'd basically need a stepladder to climb aboard some of the larger, taller dual-purpose models from other companies.

ROYAL ENFIELD
HIMALAYAN

The Royal Enfield Himalayan, the bike the Scram 411 is based on.

Just right

I had no such problem with the Scram, and at 5-feet 10-inches in height, I found it easy to sling a leg over the seat to find that I fitted the Indian-made dual-purpose model very comfortably, with a welcoming throne that's pretty well padded, though the raised passenger section is pretty minimal. But there's a grab rail for the passenger running around the back of the seat, and the back footrests aren't too high, either. The rider's footpegs have thick rubber inserts which when removed reveal a grippy corrugated off road rest, but while these flip up a little stiffly they're welded directly to the frame, like on the Himalayan, which is surely a risky mistake for any off road use which the Scram's knobbly tires pay due lip service to, where they risk being broken off in a fall. I also found them a little short, so that standing on the footrests on a dirt road was slightly awkward, because my legs risked getting scorched by being too close to the engine. That's a pity, because the Scram feels nicely balanced both on-road and off, and is light and easy to change direction on, whether standing up on the pegs or sitting down on the seat. Some thought about crashes is evident



The simple gauge cluster and upright mirrors make the views fore and aft easy to live with. Rubber pads on the foot pegs.

by the way the footbrake lever is tucked inboard, and rises up and over the right footrest, so it's a pity they welded these pegs directly to the chassis, albeit via a robust-looking boss.

But in tarmac use the Scram felt good, with the pulled-back handlebar falling nicely to hand in best cliché mode to deliver a very relaxed albeit quite upright stance. It takes no time at all to feel at home on this bike, and the stepped seat is broad and quite comfortable, while it's relatively slim behind the fuel tank, making it easy for shorter riders to put both feet on the ground at rest. Rider ergonomics are good, and this new Royal Enfield is an excellent traffic tool — I can see it becoming a commuter and courier favorite in Western markets, especially at that price. It's light-steering and ultra-manoeuvrable with that wide handlebar shared with the Himalayan, a key ingredient in traffic-choked Indian cities where I bet it's entirely at home. You sit high enough to see over car roofs in order to plot a course through traffic, plus the clutch is light to operate and is nicely progressive. The 5-speed gearbox has a flawless operation — not something you'd have said about any Enfield transmission even ten years ago — and the ratios are well chosen, with bottom gear not too much of a stump-puller, as often happens on an Asian-built bike where they have to cater for it potentially being overloaded with people and packages. Not here — this is a "normal" transmission. The 411cc engine is very smooth to ride — there's absolutely no undue vibration in normal use, though if you push the engine towards what I know from riding the Himalayan is its 8,000rpm redline — it's a pity the tacho fitted as standard to the Himalayan is missing from the Scram — you do get some tingles through the footrests over the last thousand revs before the hard-action limiter kicks in. It's pretty willing, if not especially powerful or torquey, but it's incredibly easy to ride, both in city traffic and on a winding lane out in the country. Only electric-start is fitted, which seems a bit optimistic — I'm not sure I'd want to bump start even a 411cc single with a flat battery on a gravel road, let alone in the foothills of Mt. Everest. However, assuming the battery is fully charged, the motor whirrs into life instantly, before settling to a low 1,000rpm idle — probably chosen in the interests of frugality, since fuel consumption is such a key issue for Indian customers. It picks up cleanly from low down, and I recall would accelerate wide open in top gear from 2,000rpm — on the Himalayan's tach when I rode that — without a hiccup, nor any transmission snatch. The Scram is super-flexible in its response, albeit with a tinny-sounding exhaust note that doesn't tick any aural boxes. Moreover, it was especially smooth in its response from a closed throttle with zero snatch as it picks up drive again, unlike certain other bikes in this sector, making the Scram a bike that newbies and less experienced riders will feel thoroughly at home on.

This made riding the Scram at low speeds in town or along tight country lanes both easy and pleasurable, although with the smallish engine it did get a bit breathless on open highways. Claimed top speed is 90mph (145kmh), but I didn't have a spare day to watch it get there, and it's happiest running around the

ROYAL ENFIELD

At 432 pounds full of fuel, the Scram isn't what you'd call lithe for a 400-ish-cc single, but with a seat height of just 31.3 inches, it's approachable for all kinds of riders.

U.K.'s legal maximum of 70mph, so what the heck. Overtaking does require a little bit of forward planning, though, and you must change down a gear to obtain some momentum before you pass. Despite the lack of top gear roll-on performance, the Scram fills its design brief well — but I do think the 600cc version that Royal Enfield are believed to be working on will tick all the missing boxes for Western markets, with added torque, a little extra power, and an insignificant increase in weight. However, as it is now the extra 60cc gives the Scram that vital extra edge in performance over RE's own 350 Meteor, which lacks the oomph to cruise any faster than 65mph, and is actually faster in fourth gear than in top/fifth.

That's not to say this 411cc urban flat-tracker/street scrambler isn't fun to ride as well as practical, though, and the smaller front wheel compared to the Himalayan's 21-incher made it much sharper steering. The single front disc was OK in stopping the Scram, albeit without any luggage nor a passenger aboard, although you must squeeze both foot and hand levers pretty hard to get significant response on tarmac, and try as I might I couldn't get the ABS to kick in. But the front brake could be modulated nicely, and there was quite good engine braking, too — though you must be ready for the back wheel to chatter quite easily when changing down to first gear with no slipper clutch, even if fanning the clutch lever with your left hand will soon resolve matters.

This being Royal Enfield's first monoshock frame, and with experts like Harris Performance to show them how to do it, it was rather disappointing that the rear shock was pretty softly damped and liked to wallow sometimes once I stepped up the pace a bit, especially when dipping into the apex of even a slightly banked turn with a less than ideal surface. There wasn't the controlled progressivity that I was hoping for with that rear link, and it seemed to bottom out quite easily, too, which adding more spring preload only partially cured before it became too stiffly sprung for a solo rider. But the non-adjustable fork worked OK and I was pleasantly surprised by the CEAT Gripp-XL tires. These weren't too noisy to ride on the tarmac where they gave better dry weather grip than I'd expected — though from riding the same tires fitted to a Himalayan a couple of years ago I remember they were decidedly skittish in the rain, with the rear one easy to slide under power in the wet, while wheelspin under acceleration was also an issue on damp surfaces, though I didn't experience any of those during my dry week-long loan of the Scram. Metzeler Karoos are apparently also approved for the bike, as being more accessible outside India when it comes time to change them.

Quality of manufacture on the Scram seemed pretty good, and although the heat shield on the exhaust silencer looked rather crude, the rest of the bike is quite well put together. Wires and cables are tucked away nicely, and having visited RE's ultra-modern Oragadam factory and been pretty impressed by the army of robot welders and the constant quality control checks, I wasn't surprised at that.

More details

Also included as standard on the Scram is Enfield's TBT/Turn-By-Turn navigation pod, known as the Royal Enfield Tripper, which debuted two years ago on the Meteor. This is a neat directional navigation system which takes the Google Maps directions from your smartphone, and via Enfield's free App displays the best route to reach your destination. The Tripper is simple and easy to use, as well as pretty unobtrusive, with the display housed in the smaller of the two round instruments with chrome bezels comprising the dash. But you must obviously keep your phone on your person while riding for the App to keep on delivering directions, or else purchase an optional handlebar holder for it from the wide range of Scram accessories. That stylish-looking analog speedo contains a digital panel displaying the fuel gauge, gear selected, time, mileage and twin tripmeter. Providing the Tripper GPS/sat-nav system as standard further underlines what a lot of motorcycle this latest Royal Enfield

MUSEUM
125
125

What to do in your time with a borrowed Scram 411? Ride it to visit Sammy Miller. That's Sammy aboard the works RE Bullet 350 he rode in the 1956 ISDT in West Germany.

represents for that $5,099 list price, complete with three-year unlimited mileage warranty.

Unlike on the Himalayan there's no center stand on the Scram, nor any rear luggage rack, and it's likewise devoid of the Himalayan's twin exoskeletal protective tubing either side of the fuel tank, which not only delivers some protection for it in case of a fall, but also provides a further receptacle for small luggage items to be clipped to. Maybe that accounts for the Scram costing $200 less than the base model Himalayan. But there's a reasonably substantial engine bash plate, and a variety of clipping points for bungee cords, although the mirrors are spindly and sit upright at the end of their stalks, and don't give a very good view behind you. At least they don't vibrate like they did on RE's Classic OHV singles, thanks to the counterbalancer doing its job so well.

Light-handling, accessible, practical and affordable, the Royal Enfield Scram 411 will surely capture many customers in Western markets — and not only the more youthful town-based ones that RE admits to targeting with its stated aim of "bringing the best of rough road capability to urban riding," as distinct from its more greybeard Himalayan go-anywhere clientele. It's a simply engineered all-purpose motorcycle that isn't extreme in either size, weight, performance or complexity — there are no digital riding modes here, no electronic control systems, just a nice bike to ride that's refreshingly old school, despite its perky new-gen looks and ground-breaking specification by traditional Royal Enfield standards.

Royal Enfield identified the Himalayan's mantra as being "Accessible Fun." That sums up this spin-off version very nicely, too … MC

There's a joke about horsepower in here somewhere, but we just couldn't quite put our finger on it.

NO, IT'S NOT A TYPO

1954 DMW P200

Story and photos by Robert Smith

Owner Tom Arnott is used to having to explain the name of the company that built his DMW model P200. "You mean BMW?" is a frequent response.

Many also confuse the initials with famous German brand DKW. But DMW is as English as steak and kidney pie. Perhaps the DMW brand is such a conundrum because in its 50 years of existence, the company produced just around 15,000 motorcycles, with precious few leaving Britain's shores.

Dawson's Motors Wolverhampton was formed in the early-1940s at Bell Place, Wolverhampton, in Britain's industrial West Midlands. William Leslie "Smokey" Dawson was a well-known racer in flat track and speedway races in his native Merseyside. The story goes that in the dust, smoke and mayhem of a grass-track race, Dawson was confused with Australian rider "Smokey" Stratton. In spite of the dubious origin, his adopted nickname stuck.

Ineligible for the enlistment in World War II because of old racing injuries, Dawson formed DMW around 1942 to market some of the innovative motorcycle components he had developed. Among these was the "Telematic" telescopic front fork, sold as an upgrade from the then-ubiquitous girder type. Dawson claimed his design circumvented BMW's own telescopic fork patents; but it's also likely given the war, that the combatants' intellectual property rights could be safely ignored. Dawson also designed and built a swinging fork conversion kit to add rear suspension to the almost exclusively rigid-framed motorcycles of the day. These conversions became popular when racing resumed after Europe's local difficulties.

Dawson was first an inventor and innovator. It was said he lacked the entrepreneurial and financial aptitude required to run a business manufacturing complete motorcycles. So he partnered with local businessman Harold Nock of Metal Profiles Ltd. Production was moved from Wolverhampton to the Metal Profiles factory on Valley Road in Sedgley, the Wolverhampton premises being too small. Nock and Dawson had different ideas about the kind of motorcycles they should build. With his background in competition, Dawson wanted to build sporting machines, relying on racing success to drive sales. Nock had his eye on the commuter market instead.

By 1948, Dawson decided to leave the company and emigrated to Canada,

where he worked for the Avro Company on the Arrow interceptor project. The project was axed in 1959, and a year later, Dawson returned to the U.K., settling in his home region of Merseyside. So the motorcycles that bore his name were produced after he had left the company.

DMW after Dawson

In the 1950s, Nock and DMW joined numerous other small British motorcycle manufacturers in building commuter bikes fitted with the ubiquitous Villiers 2-stroke engine — though the DMW was considered a cut above the rest, alongside Greeves and Ambassador.

Announced in 1949, the first DMW motorcycle in this line was a lightweight road machine powered by a 122cc Villiers 10D single (50mm x 62mm) with a 3-speed transmission in unit with the engine. (Some sources report that a 98cc version with Villiers 1F engine was also available; if so, it would have had a 2-speed transmission with gearshift controlled by a handlebar lever.) The new machine went into production in 1950 and the company was soon producing 50 motorcycles a week.

1951 brought a new frame using square section tubes and fitted with Metal Profiles' own front fork and a rigid frame. A 200cc version with a Villiers 197cc 6E engine of 59mm x 72mm was added that year, and both models were available in standard or deluxe versions. Ironically,

Elegant nacelle houses headlight and horn as well as instruments and lighting controls; U.K. road tax disc shows the P200 was last registered for the street in 1956.

given Dawson's swingarm patent, a plunger rear suspension was offered as an option! At London's prestigious Earls Court motorcycle show in 1953, DMW showed a new model fitted with the also new 4-speed Villiers 224cc (63mm x 72mm) model H1 single. This engine was carried over into a new deluxe DMW for 1954, the Cortina.

The Cortina employed an all-new frame with square section top tube and front down tube welded to a pressed-steel center section that carried the rear engine mountings, rear suspension mounts and also formed part of the rear fender. The pressing included compartments for the battery and tool kit. Another pressed steel extension bolted to the rear frame section to cover the rear wheel. The final drive chain was fully enclosed. The enclosure theme continued with the deeply valanced front fender, and a neat headlight nacelle carrying the speedometer, ammeter and lighting control. Battery, rectifier and tool kit were accessible by raising the generously padded dual seat.

Also introduced in 1954 was the model P200 Mk1, which included many of the Cortina's features (like the special frame) but fitted with a 197cc Villiers 8E engine and a 3-speed transmission. Based on period photographs and advertisements, the P200 could be purchased with either the Telematic front

1954 DMW P200 MK1

Engine: Villiers 8E 197cc air-cooled 2-stroke single, 59mm x 72mm bore and stroke, 7.25:1 compression ratio, 8.4hp @ 4,500rpm

Top speed: 56mph

Carburetion: Villiers S24

Lubrication: Petroil 20:1 mix

Transmission: Gear primary, multiplate clutch, 3-speed gearbox, chain final drive

Electrics: 6v, A/C generator, rectifier, battery, flywheel magneto ignition

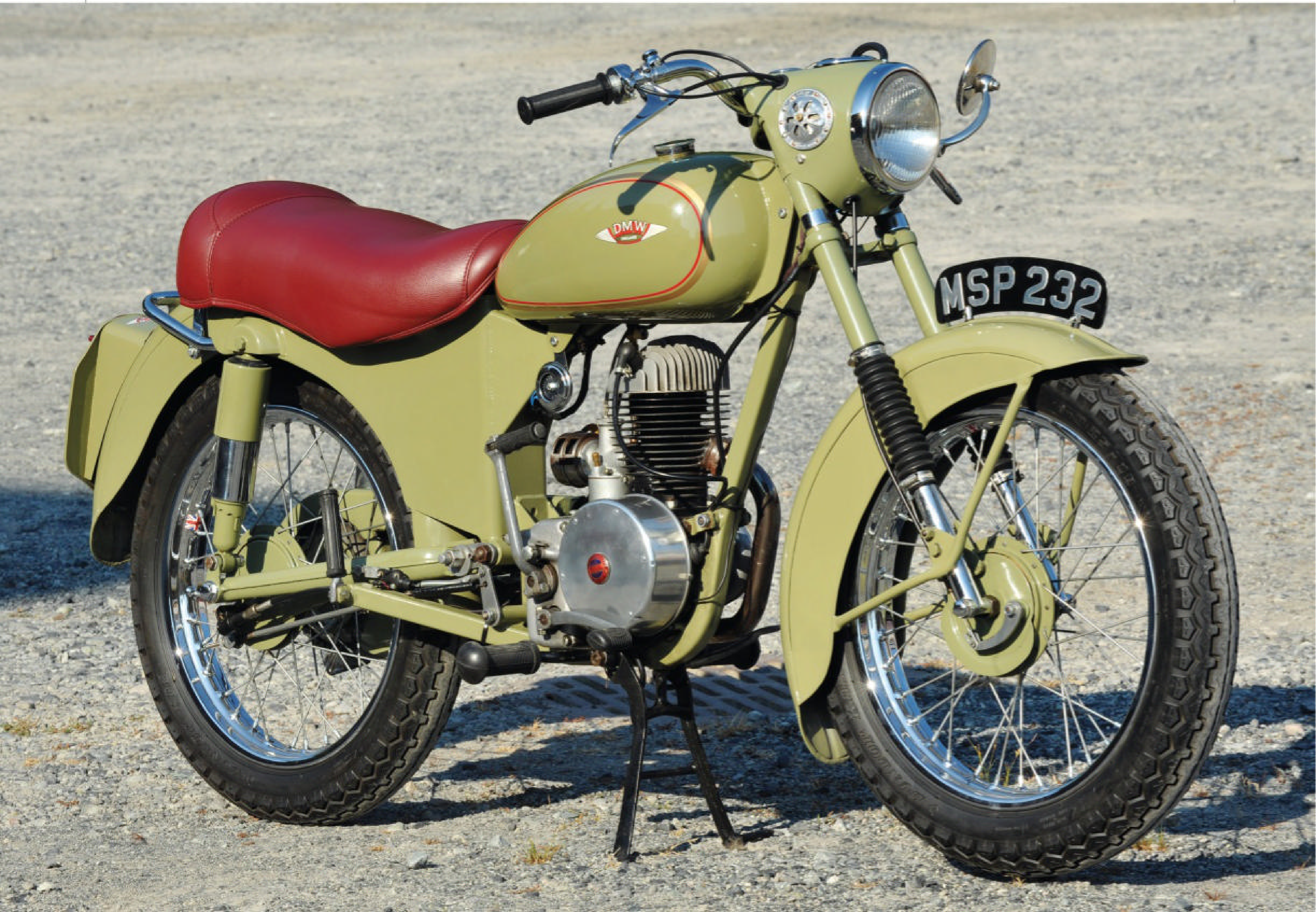
Frame: Pressed steel with square section front down tube

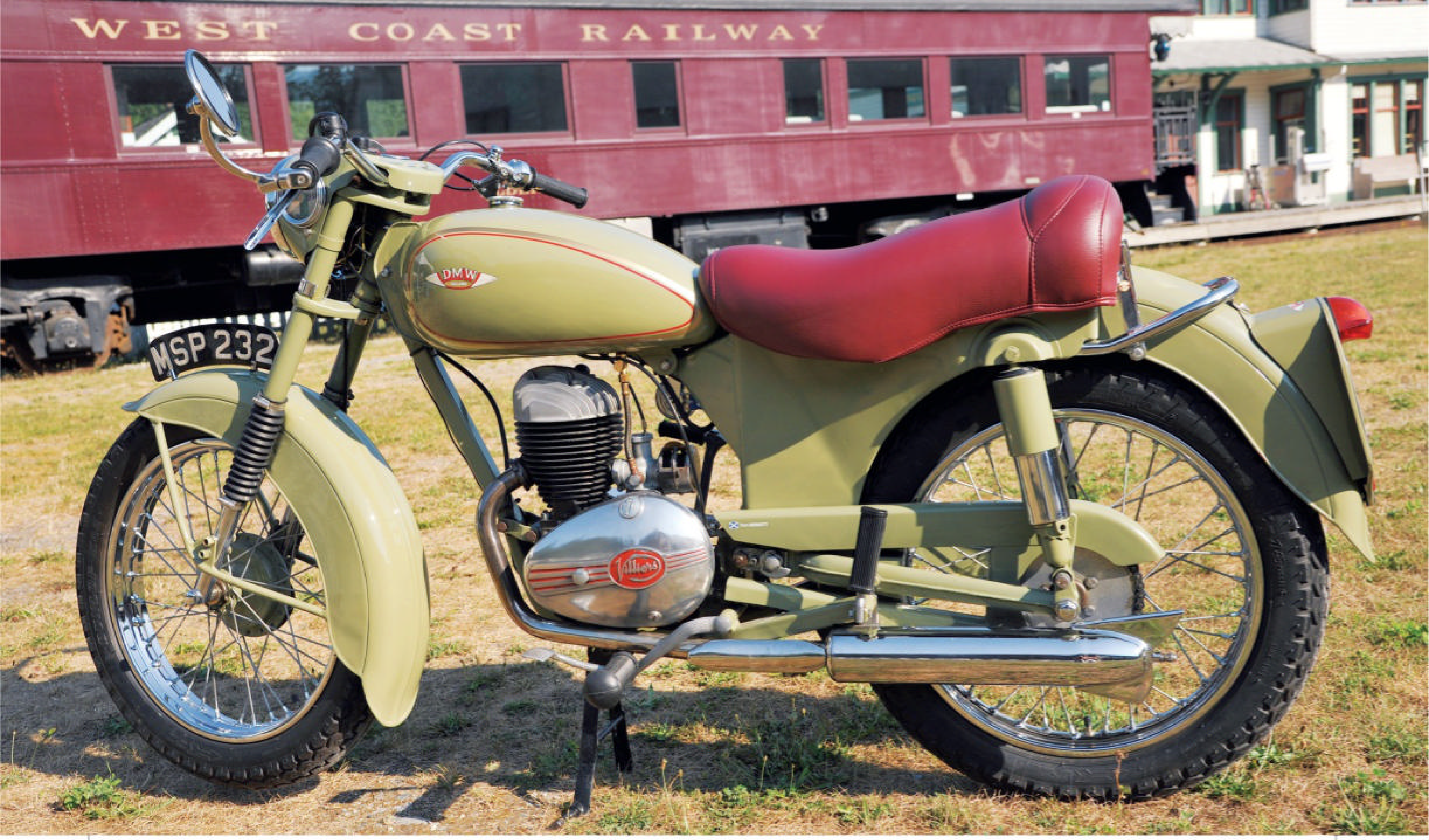
Suspension: "Telematic" hydraulic fork front, swinging arm, coil spring and damper rear

Brakes: 5in (127mm) SLS drum front and rear

Tires: 3.25 x 18in front, 3.25 x 18in rear (Stock: 2.75 x 19in front, 3 x 19in rear)

Weight: 195lb (88.5kg)





fork or the leading link Earles type. Images of both styles can be found on the web with no apparent explanation. Again, one might speculate that this was because of a patent royalty dispute, though no evidence of that is extant.

DMW under Nock was just hitting its stride in the mid-1950s — a boom in motorcycle sales in the U.K. helped. A 150cc model otherwise similar to the P200, the Leda, with Villiers 30C (55mm x 62mm) arrived in 1955: and when Villiers announced a completely new engine in 1956, the 249cc (50mm x 63.5mm) 2T twin, DMW was among the first in line.

So for 1957, DMW (along with most of the other Villiers proprietary users like Ambassador, Cotton, Francis-Barnett, Greeves, James, Panther, and Royal Enfield) announced a new model to employ the novel powerplant. The DMW Dolomite also offered an Earles front fork and optional electric start using the Ciba Dynastart system. The Bambi scooter joined the range that year, using a Villiers 98cc 4F engine in a pressed steel monocoque chassis with 2-speed gearshift. A 324cc version of the Dolomite was briefly available in 1959 using the 57mm x 63.5mm Villiers 3T twin.

DMW also employed the 250cc 2T in a novel large scooter/motorcycle cross called the Deemster. Introduced in 1962, it offered the large wheel stability of a motorcycle with the bodywork of a scooter. Though civilian sales were limited, the Deemster found favor with rural police forces, especially when a covered version (anticipating the BMW C1 by 40 years!) offered superior weather protection. The distinctive bodywork included paired 5-inch head lamps.

The Villiers 8E engine was supplied complete with primary drive and gearbox, carb and flywheel magneto.

A head-on shot reveals how slight and slender the P200 is.

DMW's product range was rationalized in 1962 with the purchase of Ambassador motorcycles, and by 1966 the Deemster remained the only street machine in production. Just the Hornet race bike with Villiers Starmaker engine and the Highland trials machine made it to 1967, when DMW effectively ceased motorcycle production. Though it wasn't the last of DMW's connection with Villiers. The latter company was bought by Manganese-Bronze holdings around 1965, effectively ending the proprietary engine business. However, Metal Profiles did buy jigs and tools from M-B and continued supplying Villiers parts and some engines into the 1970s.

Tom Arnott's 1954 DMW P200

When Tom Arnott immigrated to British Columbia from Scotland in 2020, he brought two motorcycles: arriving with him was a 1980 BMW R65; and a bike that had been in his family from when it was new in 1954, a DMW P200 Mk1.

"Due to COVID restrictions in the U.K. we had to bring our moving plans forward," says Tom. "We were given 4 days to pack up all our house contents and have it loaded into a 40-foot shipping container." The two motorcycles were packed into crates provided by the shipping company and arrived six weeks later. "Registering the bikes at Canadian customs was fairly straight forward and it helped that the customs officer being a keen biker."

"From my early years in the Sixties, I can remember my father coming home from work on his DMW P200. He had bought the bike new from Gibson's bike shop in Kirkcaldy, Scotland, for £135 in 1954 when he was 24 years old."

Tom's father was a railroad engineer driving steam locomotives and had to travel to work in all conditions, including the Scottish winter. He had traded his BSA Bantam for £60 toward the DMW. "The roads were not treated with salt, as today," says Tom, "but ash was used to give purchase on snowy roads.

Dawson's Patents

Smokey Dawson left the company that bore his name in 1948, but while with the company he had registered three patents that might have earned him some money. (This information is from historywebsite.co.uk)

There was the Telematic front fork patent, which was said to circumvent BMW's own telescopic fork patents. It's not clear how Dawson achieved this. And many other British companies were working on their own telescopic fork at the same time. Royal Enfield, for example, demonstrated a telescopic fork in 1941.

It's also confusing that Metal Profiles, the company that owned the DMW brand from 1948-on, was in the business of making telescopic forks, presumably adopting Dawson's design. That said, throughout the 1950s and into the 1960s, DMW motorcycles were sold with both a telescopic fork and a leading-link fork of the type patented in 1951 by Ernest Earles.

A second patent for a swinging fork rear suspension appears to incorporate similar ideas to the McCandless brothers' Featherbed frame — though it also featured a snail cam near the pivot for easy chain tension adjustment — an idea later adopted by the Rickman brothers and BSA.

A third patent concerned the use of a dual-sided front brake, intended to eliminate the twisting forces on the front wheel inherent in using a single-sided brake. But Vincent was using a double-sided front brake as early as 1934.

Unluckily for Dawson, and in spite of agreements to the contrary, Harold Nock let the patents lapse anyway.

DMW
ENGLAND

Three-gallon tank holds gasoline pre-mixed with engine oil at 20:1 ratio.

Unfortunately, this would compact and cause ruts. Travelling to work meant that the bike would be in top gear and both feet were used to steady the rider." Tom remembers his father's riding gear consisted of his railroad oilskins, RAF flying boots and gauntlets. In 1962, with more "bairns" on the way, more capacious transportation was needed. Tom's father bought a BSA Golden Flash with a Watsonian double-adult sidecar. Tom remembers journeys with his mother in the front seat with his younger brother, while he sat in the back with his sister.

"I recall the trips in the sidecar being really fun," says Tom, "however, when I think about it now there was absolutely minimal protection for any of us. My father would wear a helmet but occasionally he would wear his old national service army beret!"

Like most families at the time, the Arnott's joined the trend in trading the combination for a car, a Morris Minor Traveler, "much to my father's great sadness," says Tom. On his father's passing in 2014, Tom inherited the DMW, which had evaded being sold thanks to his father's inability to part with it.

"The DMW had been stored in the garden shed. When I finally dug it out of the shed, 50 years of Scottish winters had taken its toll, and the metalwork and engine were both in very poor condition."

Tom had no prior experience of motorcycle restoration, and indeed didn't get his motorcycle license until 2012. "I was not sure where to go with this project but I found out that there was a local vintage and classic motorbike club in Peebles, the town in Scotland where I lived." Tom was able to make contact with local members who provided information and assistance.

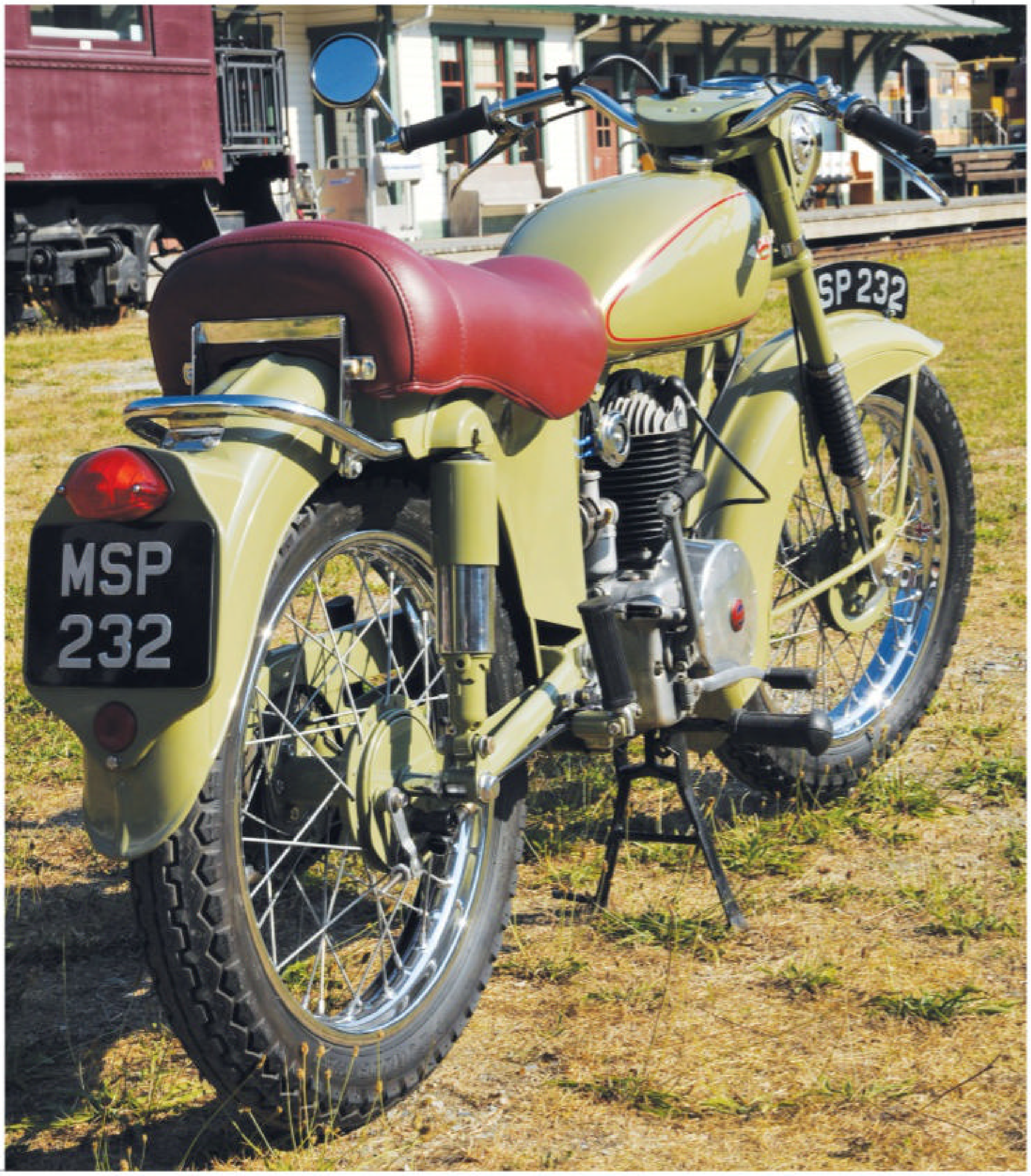
"Although still a huge learning curve for me, I was put in contact with the many folk who helped me through the project," says Tom. "It was obvious, that due to the rarity of the bike, getting parts was going to be difficult if not impossible. Fortunately, the bike was intact. I was able send off the original parts, such as the exhaust, and have new parts made." However, the engine had seized and was shipped back to Villiers in the U.K. for rebuild (villiersservices.co.uk.)

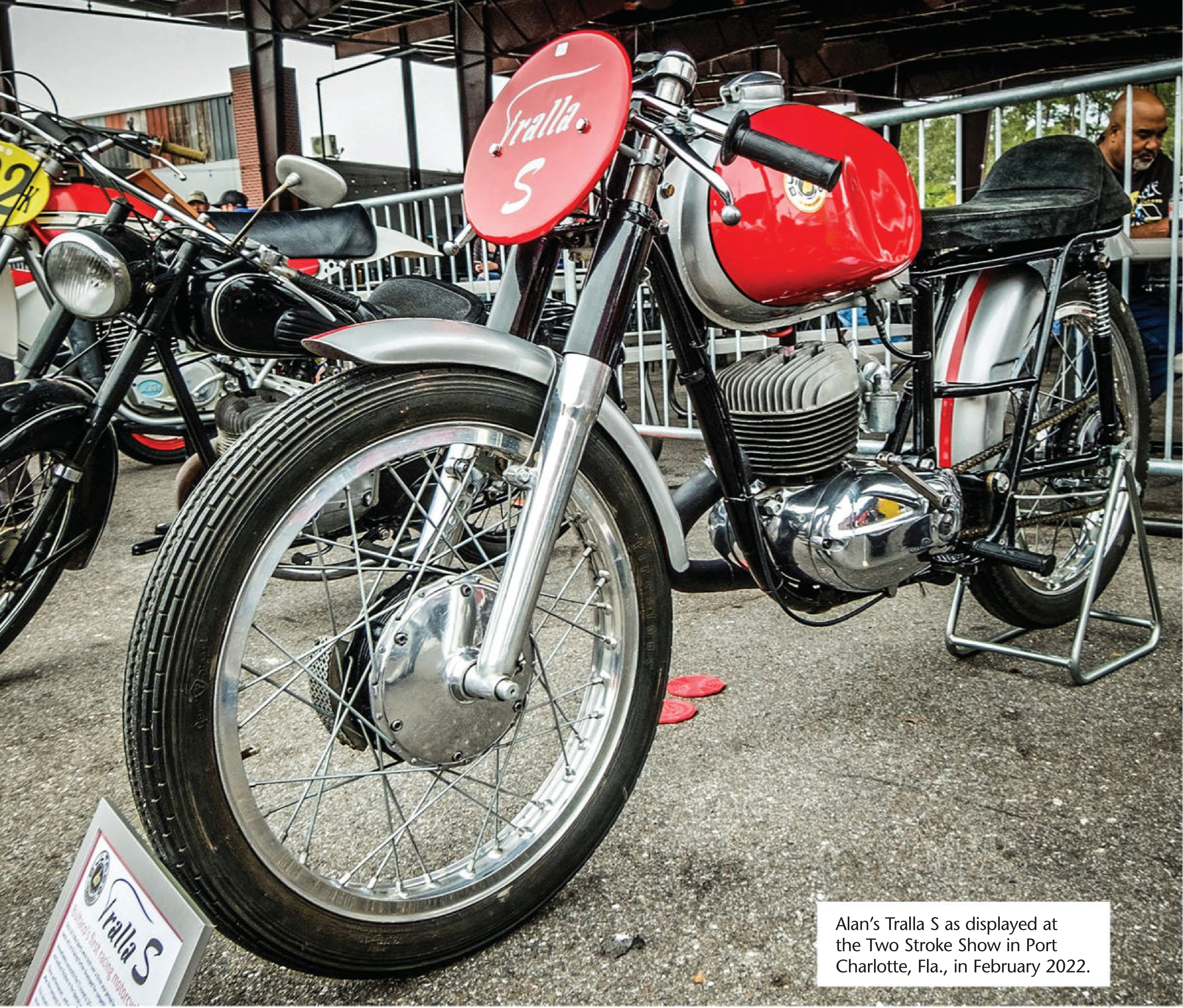
"Like most of you who have restored old motorbikes, the original budget you have in your mind and the final costs never are quite the same. I really enjoyed the restoration, but at times found the whole project so frustrating, but I guess that is all part of the journey."

"I have really enjoyed the challenge of restoring a vintage bike. I have attended a number of vintage rallies and won best bike in class several times. I have met so many interesting and helpful folk through the club and at the rallies. I am now ready for my next project; however, my wife is not so enthusiastic!" MC

French Connection

In 1953 DMW introduced a pair of street machines built around 4-stroke OHV engines of 125cc and 170cc from Ateliers de Mécanique du Centre (AMC) in Clermont-Ferrand, France. Two competition engines, a SOHC 250cc and DOHC 125cc were also sourced for the Hornet race bike project. Though unrelated to Associated Motor Cycles of Plumstead, London, there was and is enduring confusion around this period. Ironically, the British AMC company was later to build its own engines, a range of 2-strokes of similar specification to the Villiers units custom designed in Italy by Vincenzo Piatti and built in England.





Alan's Tralla S as displayed at the Two Stroke Show in Port Charlotte, Fla., in February 2022.

BULTACO

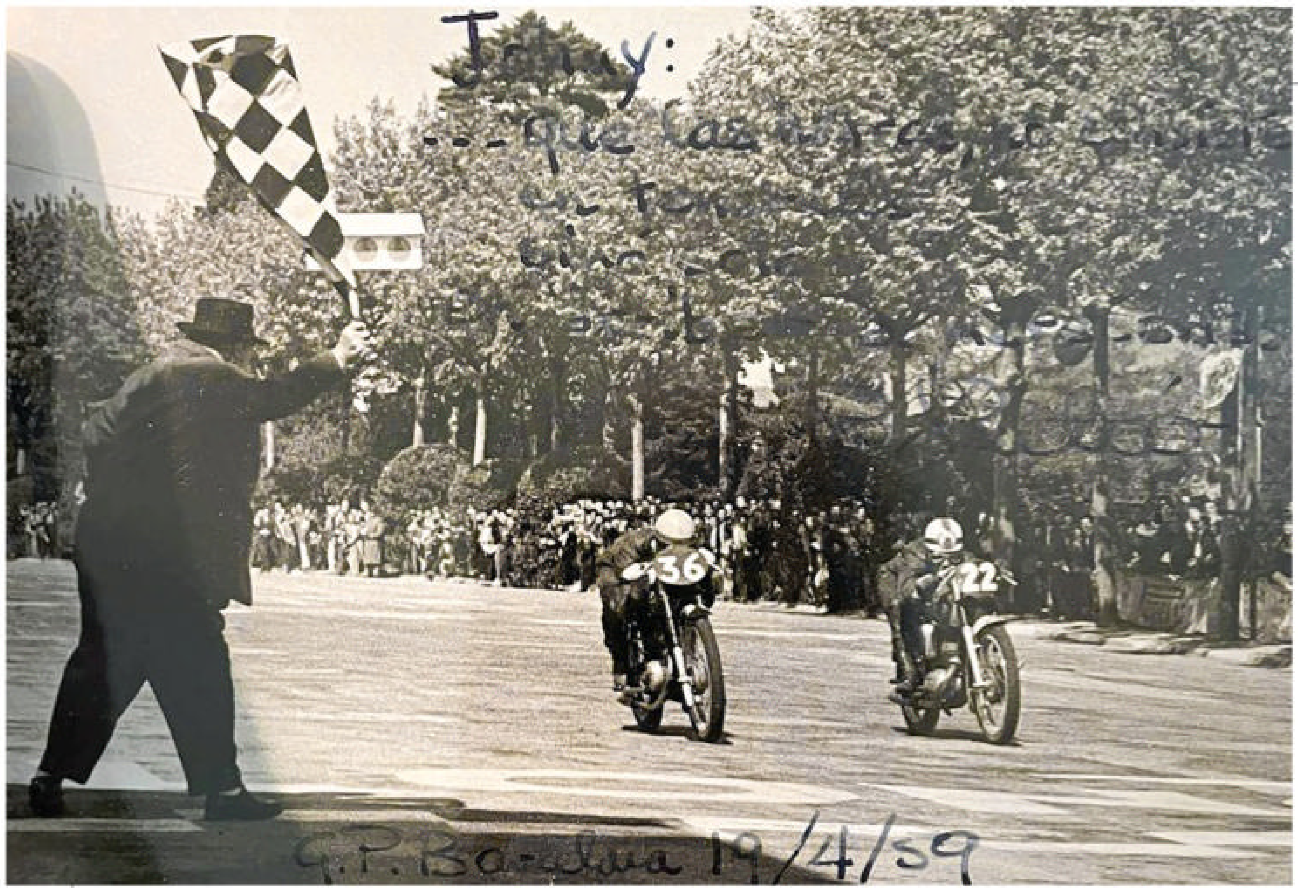
The Forgotten Early Racers

Story by Alan Singer

When Bultacos are mentioned, most think of motocross or trials machines, perhaps of enduros. Some may remember the Metralla sports bike. And a very few will recall the TSS road racers which, for a brief time, put the Spanish manufacturer firmly in the world championship conversation.

Among even the most ardent Bultaco enthusiasts, few know that TSS stands for Tralla Super Sport. The first Bultaco, famously born on Señor Bulto's farm in 1938 was the Tralla, a 125cc road model with (for the time) sporting performance.

The progression from this modest beginning to the emergence of the TSS four years later is the missing link in the company's history, a period barely touched upon in any Bultaco histories. The purpose of this article is to shed some light on the men and motorcycles that first established Bultaco's sporting credentials.



Johnny Grace finishing Bultaco's first race at the GP of Barcelona. Photo inscribed and signed by FX Bulto.

COURTESY JOHN GRACE, JR. (TOP)

Looking back

Though a long-time Bultaco enthusiast and minor collector, I too knew nothing of the pre-TSS road racers. In August of 2021 I was fortunate enough to happen upon the chance to purchase a very rare Tralla Sport (TS) from Igualada, Spain's Pons family collection. This spurred me to find out more about the TS model, its development and the men who rode them.

Less than six months after the introduction of the Tralla, Bultaco established a race shop in a garage on the farm. Johnny Grace, a Spanish speaking native of Gibraltar, followed Bulto out of Montesa to assist in founding the new company. A successful racer, he became the de facto racing director. Working with Grace was a young factory technician, Francisco Valera, known as "Bambi." Together they modified a standard Tralla, adding a new carburetor and other changes. This first version retained the stock lights. This became the first iteration of the TS. It is thought that fewer than a half dozen early TSs were built in 1959.

On June 19 of that year Grace finished second at the GP of Barcelona, Bultaco's first race, which was a very successful beginning for the new company and its nascent race team. Later in the year at the 24 hours of Montjuic, Grace was third, behind Bulto's nephew Juan Soler Bulto. The pairs' 125cc bikes were only beaten by a 600cc BMW.

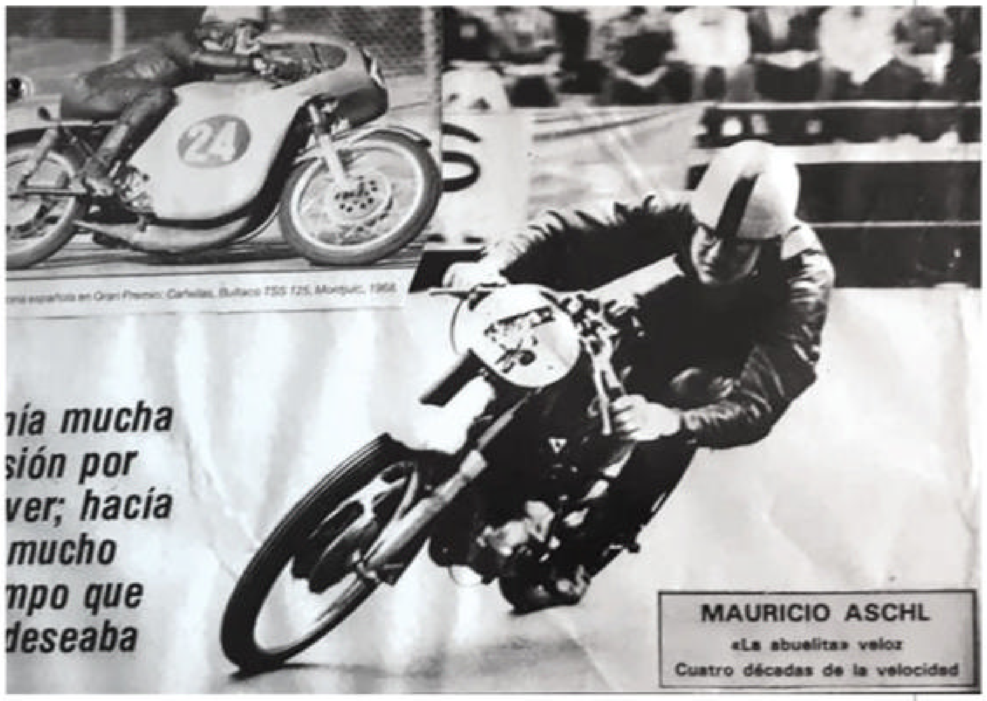
In 1960 Mauricio Aschi, a young factory rider for Montesa, joined the Bultaco team. He was joined by Juan "Tiger" Sobrepera, the owner of Bultaco's service center in Sabadell. To support these riders, a new version of the TS was developed. Still retaining lighting, this edition had increased power from porting changes and a tuned exhaust. This work was rewarded by further successes in that year's races.

Grace again had a great race, finishing just .36 seconds behind Luigi Taveri's MV Agusta at the Spanish GP. Bambi and Tiger finished eighth overall and first 125 at that year's Montjuic 24 hour. They were proclaimed the 1960 Endurance Champions of Spain.

Advancing design

For 1961, the race shop produced the final and most advanced version of the TS. Purely a racer, it featured a tuned exhaust, lighter fenders and a racing seat. It made no pretension of being a street motorcycle. This was a pure racing machine, born of some competitors complaints that the TS should not be considered a production bike. There were probably a half dozen examples constructed. The last couple were actually built after Tralla production had ceased. These were assembled using B2 (Bultaco 155) frames rather than the original B1.

Aschi led off 1961 with a win at Gran Canaria, followed by



nía mucha
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MAURICIO ASCHL
«La abuelita» veloz
Cuatro décadas de la velocidad

Mauricio Aschi wearing the victor's wreath at the 1961 Spanish GP at Circuit Jarama (left). Part of a tribute article written upon his death at age 80 in 2020 (above).

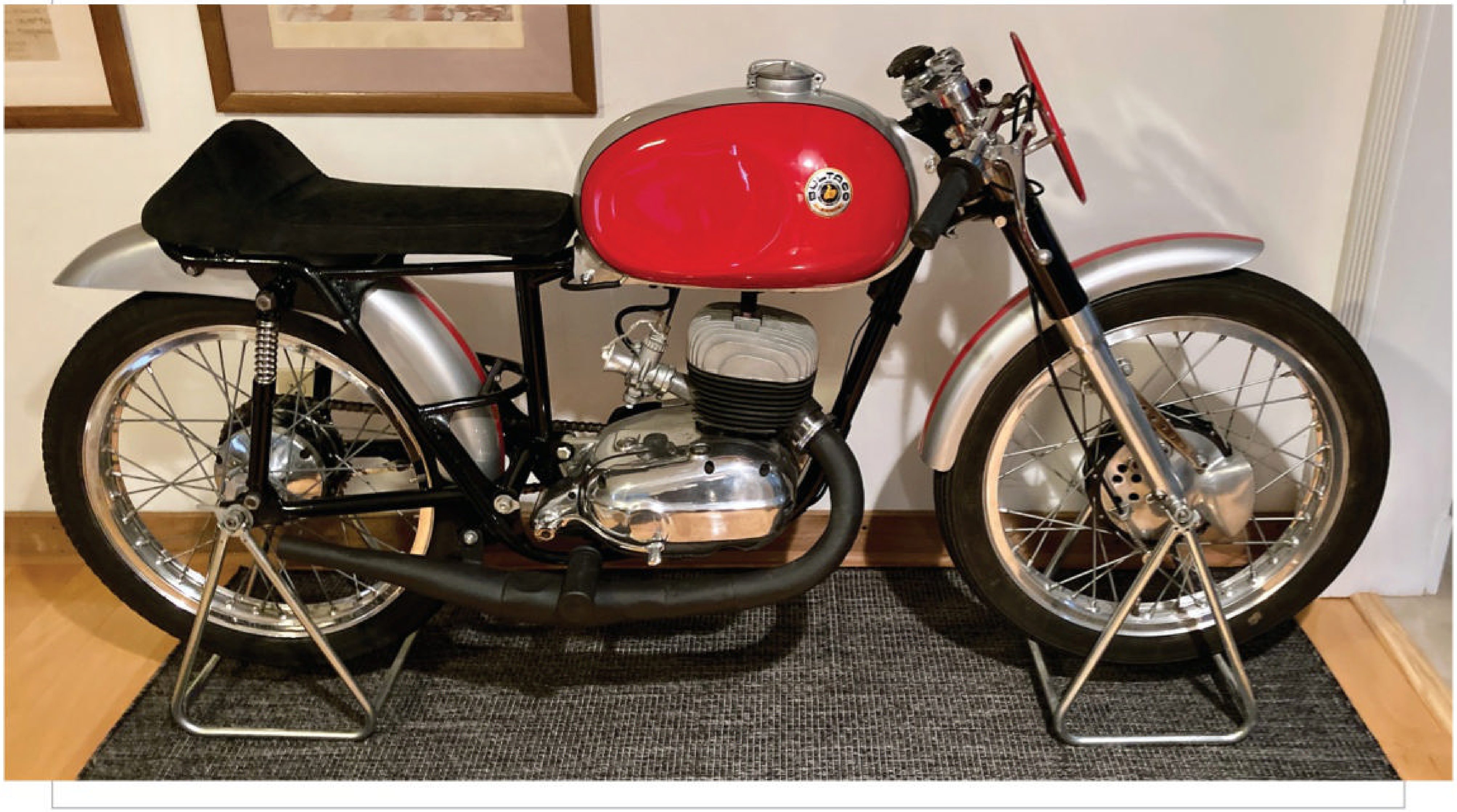
Two photos from Ramon Torras' historic 1962 run to Bultaco's first national championship. Torras was Bultaco's fastest, most successful racer of the early 1960s. The Tralla S in repose at home (below).

a great victory winning the Sport Nacional class in the Spanish GP at Circuit Jarama. Sobrepera took on an aspiring young racer apprentice at his shop. Later that year they shared a Tralla Sport to win the 125 class at the Warsage (Belgium) FIM endurance race. It was Tigers last race win and the first for Ramon Torras.

Torras would go on to become one of Spain's greatest racers. In early 1962 he delivered one last victory for the TS, winning the RFME 125. Later that year, he adopted the newly developed TSS and went on to international success before his untimely death in 1965. Sadly, his mentor Juan Sobrepera died shortly after. Of the other pioneers, their futures were far better. Grace passed in 1998 having dedicated his life to the brand. Bambi too remained with Bultaco, serving for years as their off road competition director. After the factory closed in 1984, he spent some time doing restorations for the Pons', before retiring. Mauricio Aschi died in 2020, aged 80. He was eulogized with numerous tribute articles in the Spanish press.

With the ascendance of the TSS, the TSs were relegated to club racing and rather quickly disappeared from sight. Hundreds of TSS race bikes

FOTO GUAPAS ARCHIVE (TOP)



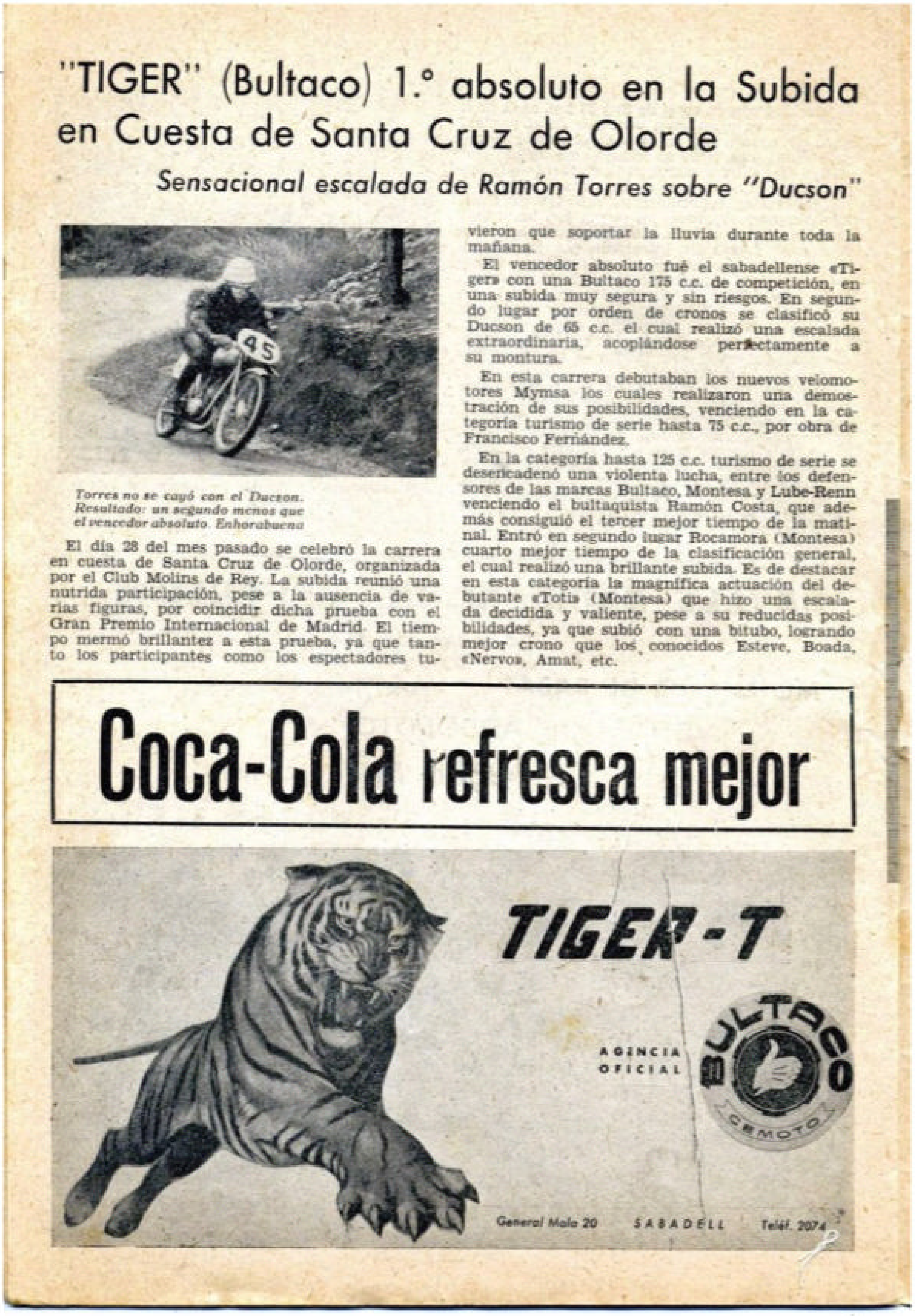
This page from a Spanish periodical (right) recounts the successes of Juan Soprepera "Tiger" and Ramon Torras (note the misspelling), and includes an advertisement for Tiger's shop. A portion of the Pons' collection (bottom right) and the TS being prepared for shipment to the U.S. (bottom left).

were built in a variety of sizes, some even water cooled. Riders such as world champion Ginger Molloy made them legendary and popular with collectors and vintage racers today.

Of the TS it is thought that about 16-18 were built over the three season span. The number remaining is not known. My late 1961 model is thought to be one of three left, the only one outside of Europe.

A small number of motorcycles, ridden by mostly forgotten pilots. But without them, there would not have been a TSS, and perhaps even the young Bultaco brand might not have survived. MC

Alan Singer is an old fart who has been playing with Bultacos for half a century in his home-based MotoEuro Garage in Jacksonville, Florida. Some of his builds have won awards and been seen in enthusiast magazines. His pals remain unimpressed. He continues to seek information on the Tralla Sport.



"TIGER" (Bultaco) 1.° absoluto en la Subida en Cuesta de Santa Cruz de Olorde

Sensacional escalada de Ramón Torres sobre "Ducson"

Torres no se cayó con el Ducson. Resultado: un segundo menos que el vencedor absoluto. Enhorabuena

El día 28 del mes pasado se celebró la carrera en cuesta de Santa Cruz de Olorde, organizada por el Club Molins de Rey. La subida reunió una nutrida participación, pese a la ausencia de varias figuras, por coincidir dicha prueba con el Gran Premio Internacional de Madrid. El tiempo mermó brillantez a esta prueba, ya que tanto los participantes como los espectadores tuvieron que soportar la lluvia durante toda la mañana.

El vencedor absoluto fué el sabadellense «Tiger» con una Bultaco 175 c.c. de competición, en una subida muy segura y sin riesgos. En segundo lugar por orden de cronos se clasificó su Ducson de 65 c.c. el cual realizó una escalada extraordinaria, acoplándose perfectamente a su montura.

En esta carrera debutaban los nuevos velomotores Mymsa los cuales realizaron una demostración de sus posibilidades, venciendo en la categoría turismo de serie hasta 75 c.c., por obra de Francisco Fernández.

En la categoría hasta 125 c.c. turismo de serie se desencadenó una violenta lucha, entre los defensores de las marcas Bultaco, Montesa y Lube-Renn venciendo el bultaquista Ramón Costa, que además consiguió el tercer mejor tiempo de la matinal. Entró en segundo lugar Rocamora (Montesa) cuarto mejor tiempo de la clasificación general, el cual realizó una brillante subida. Es de destacar en esta categoría la magnífica actuación del debutante «Toti» (Montesa) que hizo una escalada decidida y valiente, pese a su reducidas posibilidades, ya que subió con una bitubo, logrando mejor crono que los conocidos Esteve, Boada, «Nervo», Amat, etc.

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TIGER-T

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BULTACO

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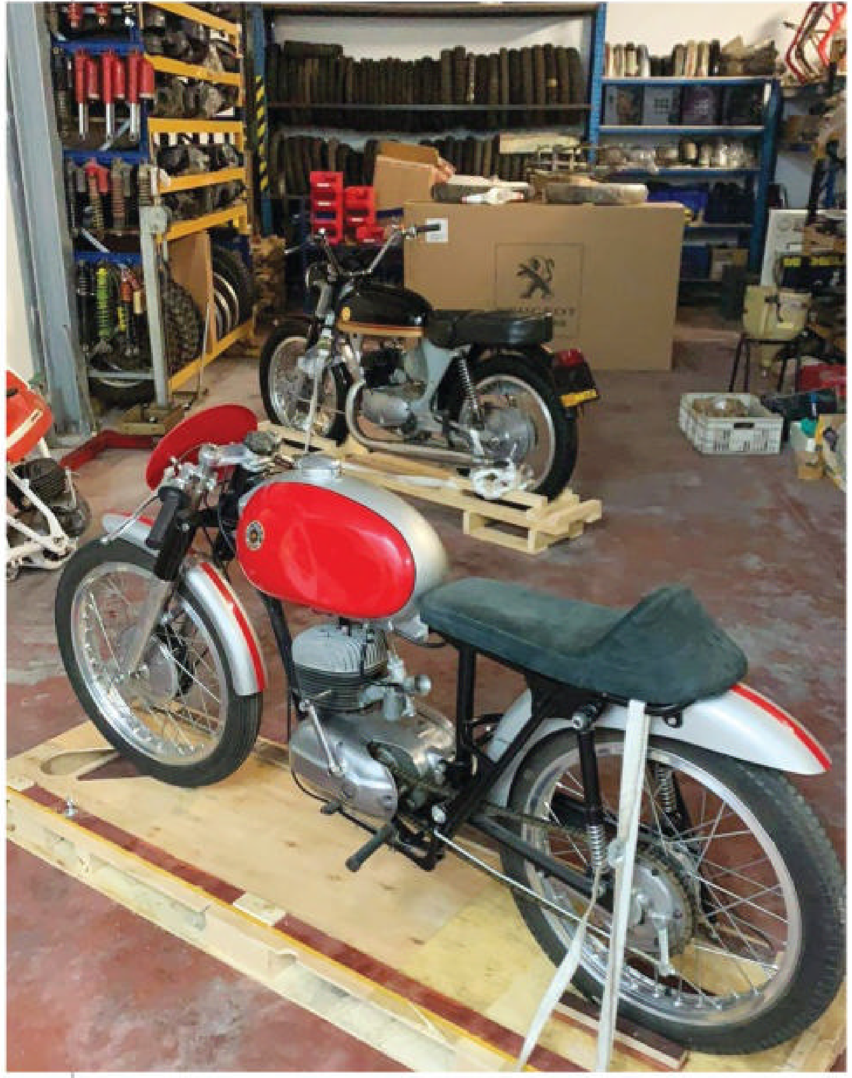
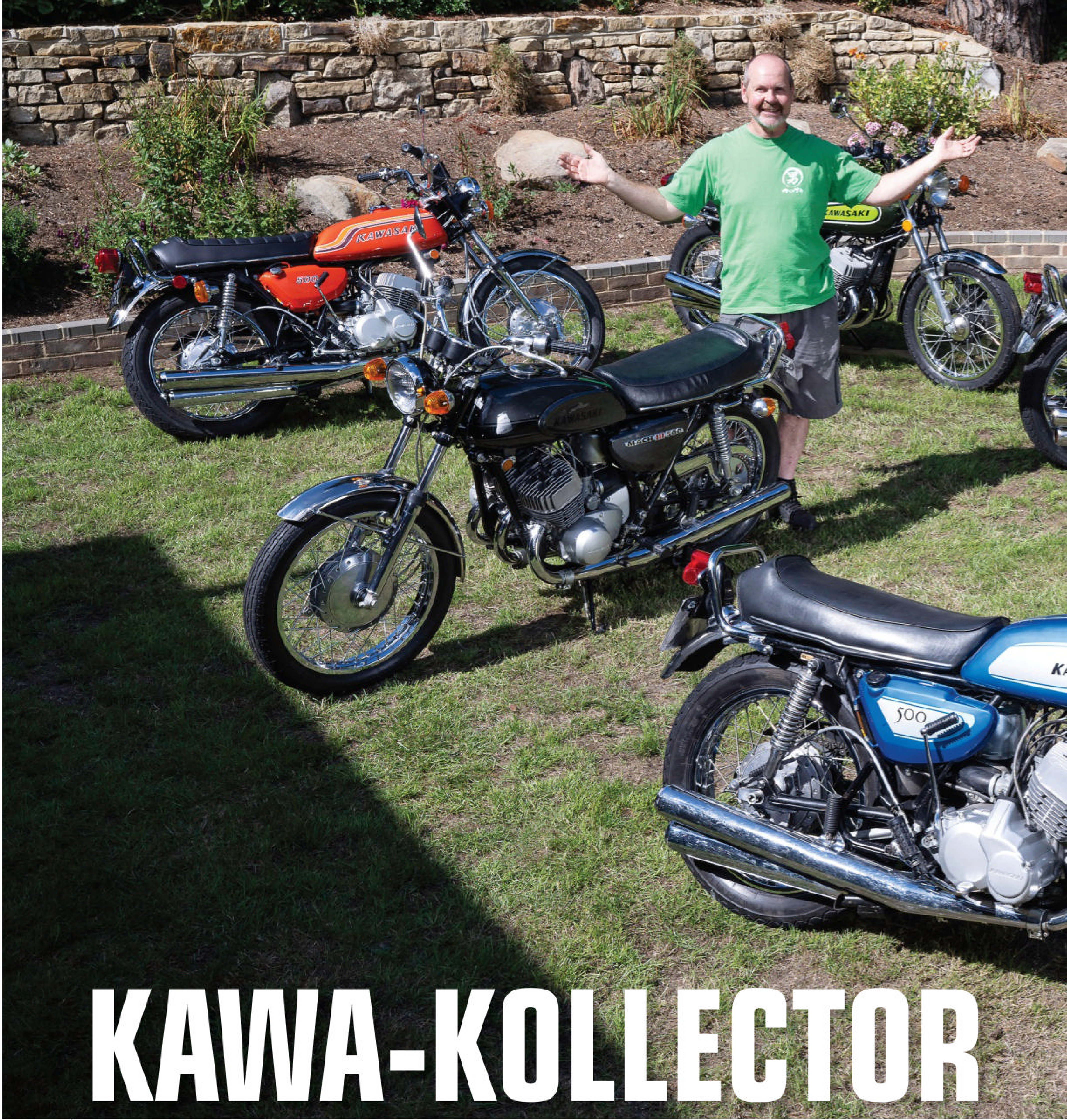


ALBERT PONS (2)



KAWA-KOLLECTOR

Rich Hobbs and his collection

Story by Alan Cathcart
Photos by Oli Tennent

2022 marked the 50th birthday of two ultra-significant models in Kawasaki's back catalogue, which at the same time could hardly be more contrasting one to the other.

They're the beat-that-Honda 903cc 4-cylinder Z1 4-stroke and the H2 Mach IV 750cc 2-stroke triple, Kawasaki's ultimate drag-strip dominatrix which took no prisoners in straight-line competition. Going round corners was however quite a different matter.

One man who's been fortunate enough to be able to celebrate both birthdays by simply opening his garage

KAWASAKI
KAWASAKI
MACH III 500
AWASAKI

Collector Rich Hobbs and his backyard full of Kawasakis. Shown here are just six bikes of his total crop of 22.

doors and choosing any of the 22 different Kawasakis he owns for a ride through the countryside around his home is British Kawa-kollector Rich Hobbs. For Guildford, Surrey-born Rich, 57, who runs a property maintenance business, has been a Kawasaki owner since 1984, after passing his test a couple of years earlier on a borrowed Honda SS50. "I've always felt Kawasakis were a cut above the rest," he says. "The way they look and their engineering has always been spot on, and I've always felt they're one step above everything else. After leaving school I went to work in a gas station on the A3 at Wisley that I needed a cheap car to get to, which then died on me. So by dint of no drinking and no going out, I managed to save up £600 to buy a green Kawasaki Z650, then my dream bike. My mom drove me up to Watford to pick it up — and I've still got it!"

However, that first Kawasaki lasted just a month before the big ends blew. "I went to my local Kawasaki shop, and the mechanic there diagnosed it immediately, and offered to fix the engine for me after hours in his home workshop. That was 35 years ago, and

Rich's two 1969 500 H1 Mach 3s parked in the kitchen and dining room. The one in the back lives inside and doesn't get ridden, but the one in front does.

he's been my mechanic and best friend ever since. His name's Mark Hutton, he's very knowledgeable on all Kawasakis, and today he lives just down the road from my home, which is very convenient!"

Various other Kawasakis came along, including a shaft drive GT550 which Rich used as a motorcycle courier for five years. "I had five bikes by then, but it was too many, and anyway I'd lost my love of motorcycling because now it was just a job. The last thing you want when you've been out riding a bike all day every day delivering stuff is to come home and work on something else with two wheels and an engine as a hobby. I just fell out of it, got married to Kay, had children, and sold all my bikes except for the Z650. I lost contact with Mark for around 20 years, but then in about 2010 when my children had grown up and I started to have a bit more money left over, I came back to bikes again — and it all took off from there." This means Rich Hobbs' extensive collection of Kawasakis covering the 1969-1977 period with one lone later bike, has

The Bikes

Let's allow Rich Hobbs to give us a guided tour of the bikes in his collection, running from little to large …

Kawasaki 250 Bison & KE 175

"I have a couple of rotary-valve 2-stroke single trailbikes both from 1972 — the 250cc F8A Bison and the 175cc F7B, which are a pair of Mr. & Mrs. off-roaders. My wife Kay is very petite, so the F7B is ideal for her, because it's actually a 125 frame with a 175 motor, so it's a very small bike, but very effective. All the other Kawasaki 2-strokes were piston-port engines, but these trail bikes have rotary-valve engines, which were very effective back in the day. Actually, you could probably semi-submerge them in water and they'd still run, because the carburetors are mounted inside the engine on the side of the crank, so until you get the airbox under water, you're good to go!

"I completely restored the 175 which came from the States as a total wreck, but despite being an off-roader the 250 Bison is unrestored and still has the original paint, which is just fabulous. It's very rare in the U.K., especially in this condition, but we do use it quite regularly."

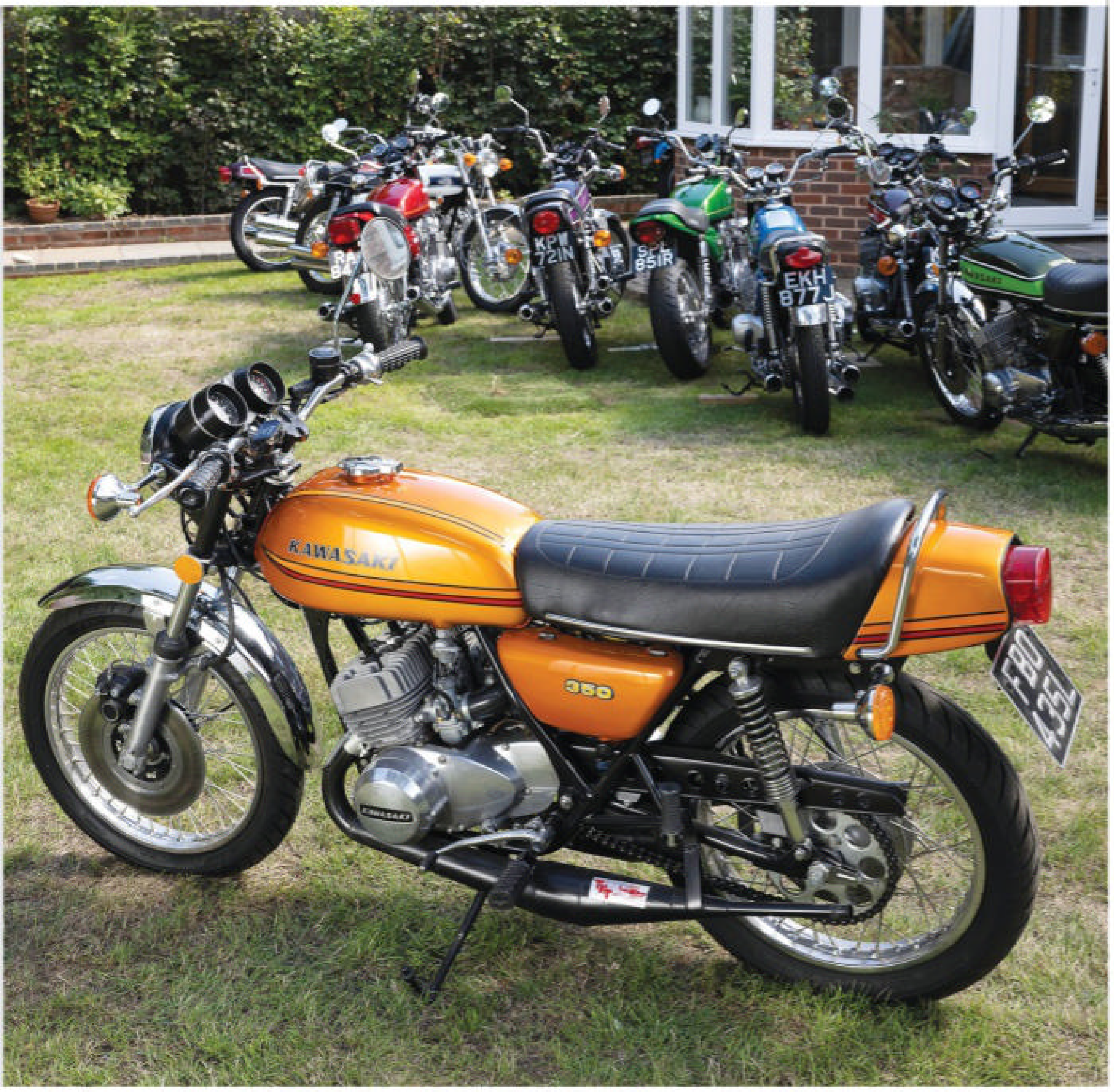
Two lifts in the shop, here occupied by a Z650 and Z1B. More of the collection is visible in the parking area through the door.

been assembled in little over a decade, mostly by purchasing and personally restoring basket cases, or by acquiring bikes that Mark Hutton had previously done the same thing on himself.

That lone later bike essentially kick-started what Rich initially thought might be a small K-kollection of half a dozen bikes, but which just seemed to grow over the years. Does that sound familiar? He says he'd always fancied the KZ1000 LTD, Kawasaki's U.S.-market-only high-barred boulevard super-cruiser made for just a couple of years in 1980-1982, and managed to source one of these from DK Spares (dkmotorcycles.com) with the intention of restoring it. "It was a nail, with so

Kawasaki 350-3 S2A Mach II

"This 350cc S2A is a 1972 bike which they termed the Mach II, and was launched as a spinoff from the 500cc H1. There was also a 250cc triple, the S1 Mach I, but I've never seen one of those. Both the S-models had the same crankcase with a 52.3mm stroke, and this 350cc version has a 53mm bore for 346cc. This one was found in America set up as a drag bike, so it had an extended rear end, wheelie bars, and these TNT/Tony Nicosia stinger exhausts on it, which are just totally raucous. Tony was a drag racing legend on Kawasakis. Dave Howard from Keighley, who's my supplier of new old stock parts, rebuilt the engine completely with such a crankshaft. It goes like an absolute rocket, but it's so loud it's embarrassing. In fact, I've got baffles to fit on the end of the pipes for when I start it, and when I get a few miles up the road I get out my screwdriver and remove the tail pieces. I don't think it was ever originally sold in the gold it's painted in, more of an orange shade as well as a pale blue. But that gold is so lovely that I had to leave it like that. I don't have a total originality fetish!"



A lineup of 500 and 750 triples in a variety of colors. One has to love the bright paint schemes of the late '60s and early '70s.

many major parts missing. There was no sump, no clutch, no carbs, no exhausts and no seat, and it had obviously been left outside for a long time, because we had to cut the swingarm out! But I found all the parts either on the internet or through DK Spares, and rebuilt it — so that taught me what it was feasible to do. It very much lived up to expectations — it's so nice to ride, with lots of torque and a chilled-out riding position. And I must admit I get a kick out of turning up at a rally or a social, and nobody quite knows what it is!"

More to come

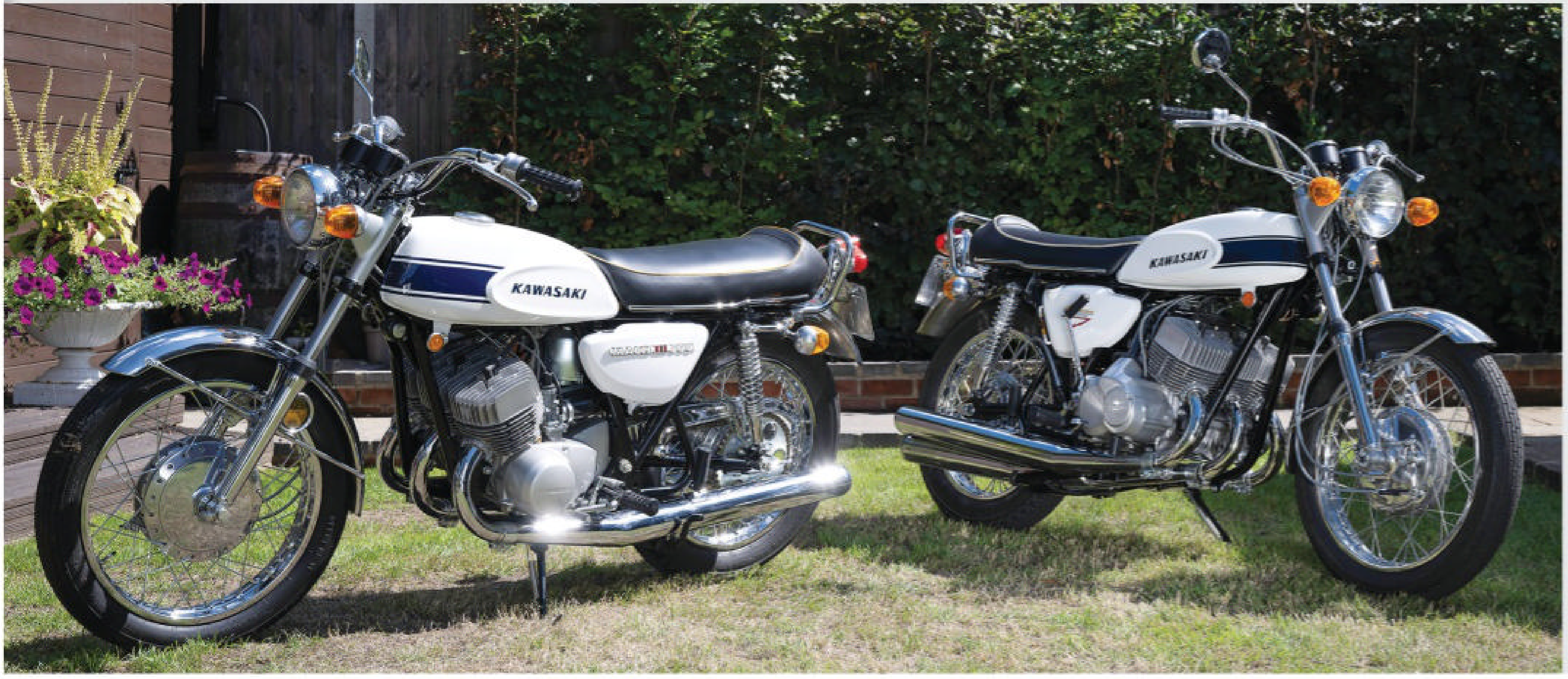
It's ironic that the bike which jump started the Hobbs Collection should be the most recent and in some ways the humblest model in it — but the satisfaction derived from its completion left Rich thirsting for more. "I'd definitely gotten the bug for finding older Kawasakis and restoring them," he says. "I'd obviously been out of it for a long time, but I really fancied the early 2-strokes, which I'd always admired but never thought I could afford to get my hands on. I'd always loved the H2

Kawasaki 500-3 H1 Mach III

"The core of my collection is the line of H1 2-strokes I've assembled, starting with the Midnight White 1969 which lives indoors and doesn't get ridden. That's because it's frame No. 125, and engine No. 133, and they made 6,500 bikes that first year, so this is a very early one, possibly the earliest in the U.K. Unlike with their other models, this is a '69 H1, and then they did the '70 H1, and then in 1971 they did the H1A, which was two years after the first deliveries. For me, they're just so pretty to look at, but I wanted to ride it. So I knew where another '69 white one was in the same condition, so I bit the bullet and bought it. That's also a sub-1,000 number, so it's also early, around No. 800. I just finished running it in this summer, and it's another completely original bike, but this time with the Kawasaki script on the fuel tank slightly askew, unlike the other one living indoors, which has it straight. They're both correct, paradoxically, depending on who was painting in the Kawasaki factory in 1969 as to what they decided was the best way of having it. I prefer the level Kawasaki — it just looks a bit drunk with it hanging down the back!

"In '69 the engines were still very crude and unrefined, with raw power. They built this to wow American youth at just $999, and many of them were written off within a mile of the showroom, because they were completely unprepared for the engine performance, so they opened them up and just took off. It's a very impressive piece of equipment, with so much speed but no handling and no brakes, though if you ride it accordingly, you can really have some fun on it. It's a lovely thing to ride, a bit like having a bucket of nails shot out of a catapult, rattly as hell and with a very fierce delivery. When it comes on strong at just over 5,000 revs, you're kicked in the pants all the way to the 9,000rpm redline.

"I have seven H1s in total — the two '69s, two '70s, and one each from '71, '72 and '73. But after that they became increasingly sanitized for environmental reasons, so that's where I've drawn a line in the sand."



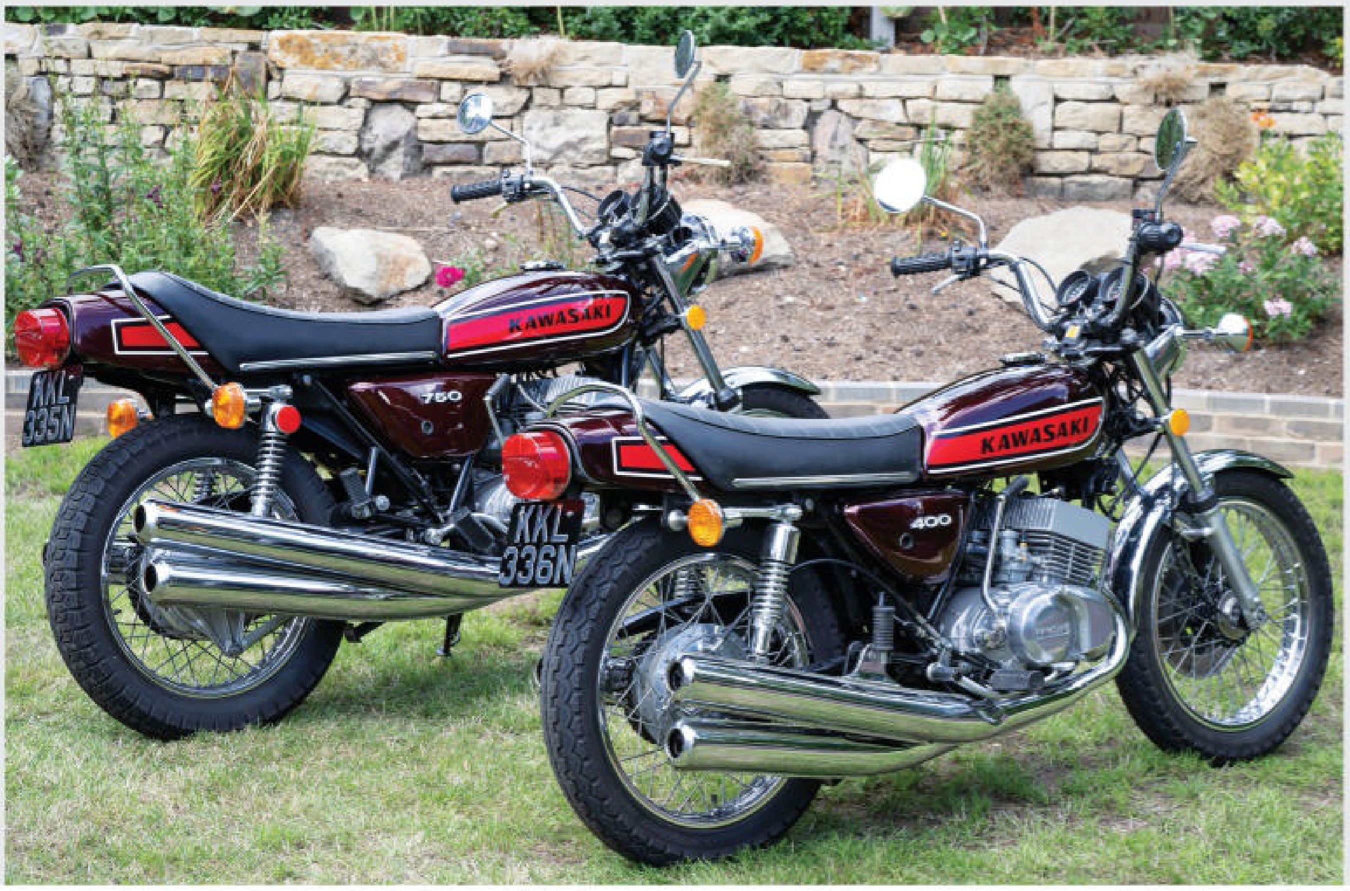
Another view of the same lineup of 500 and 750 triples from a different angle. Pick your favorite color!

750C, which is the prettier version with the longer tank and shorter seat, so that was the one I wanted, and again I found one at DK Spares. It was an American bike which I think had been crashed about 40 years ago, and just left out in the yard somewhere — in a dry state, luckily, but it was still in pretty poor condition. It cost me £6,000 [almost $7,000], even in the state it was, and another £10K [roughly $11,600] to restore, so I've put a lot of money into it, but I really enjoyed rebuilding it. Mark Hutton was very helpful as usual, and he did the engine for me while I restored the cycle parts. And again, I managed to track down all the original parts I needed to complete the bike

Kawasaki 750-3 H2 Mach IV & 400-3 S3A

"I have two H2 750 Triples, kind of by mistake! Once I got the bug for restoring, I bought the purple one and rebuilt it — the purple is such an iconic early '70s color for these models. But I also found that they did it in a lovely shade of red, so I decided to try and source another set of bodywork to paint up, and then I could maybe one year have a purple bike to ride, and another year a red bike. Sounds like a good idea, doesn't it! Well I did it, at some expense because the bodywork's not easy to find — but then just as I'd got the paintwork back for the red one, I came across a really good condition original red bike with poor paintwork. So I bought that and put my new paintwork on it, and so I have my red H2 and a purple one both at the same time! They're both 1975 H2C models, and they only made 5,000 of them, so they're quite rare. I didn't fancy the earlier models, because on the A and B versions the 2-stroke surge is much more defined, and I don't like the colors so much. The smaller a 2-stroke is, the better it runs, in my opinion: a 750 is quite a big old 2-stroke. Plus, the early ones didn't handle at all well, but by the time they got to the mid-'70s like with these, Kawasaki had gotten their act together on that.

"To go with the red H2, I've also got a 400cc S3A triple which replaced the S2 at the end of 1973, with the engine bored out to 57mm. This 1975 one is the same year as the H2Cs, and in fact it's the same color as the red one. After I'd finished restoring them both I sent off to the DVLA to get the two of them registered at the same time, both the same year and same color — and without asking for that they came back with consecutive registration numbers, which is just so cool! I've planned to run them as a His and Hers duo — my wife Kay does ride, and has done many miles on a Z650, but she's very petite so I've had to lower the S3A for her. But she'll be able to ride it, I'm sure — so hopefully we can turn up somewhere, and see if anyone notices they've got consecutive plates!"



Rich's pair of Kawasaki 750-3 Mach IVs. He restored the purple one first.

either via the web, or DK Spares."

OK — so now with the ultimate version of Kawasaki's 2-stroke titans in his garage, Rich began looking for an earlier 500cc H1 Mach III model. "The trouble was which one to go for," he says. "The holy grail is the 1969 first series model with the white-and-blue color scheme which they launched at the 1968 Tokyo Show across the hall from the Honda CB750. Mark had one he'd restored that had won Best in Show at the 2009 Stafford Classic Show, which celebrated the 40th anniversary of the model. So, I bought that from him with a view to it just being a work of art on display in my dining room, which is where it lives today." It's one of only two bikes Rich owns which don't get ridden. The other is his first-series Z1 four, which has zero mileage since restoration.

"However, I want to ride all my bikes," he says, "so then I started looking for other H1s that I could throw a leg over. Again, Mark had a later D-model that he'd just finished building from new old stock parts, and I bought that from him, too. I ran it in carefully, and it's just wonderful to ride. It has slightly less power than the earlier ones, because Kawasaki restricted it for emissions

Kawasaki Z1B & Z650

"My 1975 Z1B also came from America with just a few thousand miles on it, probably 6-7,000 — the only British [home market] bikes I've got are the Z650s. I've always loved the Z1, and it was top of my wish list when I was a teenager, and the B was my favorite because I thought it had the best color scheme — it's a lovely looking bike. I restored it to as-new condition, and it still has zero miles on it — it's too nice to ride, so I definitely bought it just to look at. It is a very pretty bike. They did them in two colors, a lovely dark red with the gold panel, and a wonderful blue. I was very torn between getting one or the other, but I've been caught in this trap before, so I decided not to get another one, even as a user!

"I started off on 4-strokes with the Z650, and always loved them, but I was always a bit scared of the Kawasaki 2-strokes. I was worried about being bucked off with the surge in the power band, but actually, as I've become more experienced as a rider, that's what I'm searching for — the ultimate rush with the big hit of power coming in. So now I enjoy riding them both. The fact that Kawasaki made such good 4-strokes right at the same time as developing the ultimate 2-strokes shows the depth of the company's engineering capabilities, which nobody else could match, not even Honda. The Z1's very impressive DOHC cylinder head puts the single-cam Honda CB750 in the shade. For years and years they still kept on making those CB's with just a single overhead cam that wasn't in the same league as the Kawasaki Z1 family.

"As well as that and the KZ1000 LTD I've also got four Z650s, but only two of them are restored. They're both 1977 Z650 B1 models in the two iconic colors, red and green.

> “Let’s just say my favorite bike is the one I’m riding today!”

purposes, but paradoxically that makes it a lovely bike to ride in normal use. It’s quite fast enough for me!”

The collecting snowball was now gathering pace, and over the next decade Rich assembled an enviable array of early Kawasakis spanning the 1969 to 1977 period. Why choose 1977 as the cutoff? “Well, after that date represented by the Z650 B1 4-stroke, they changed the Z650s quite a bit to make the B2s and B3s, and they never did it for me. I always thought the original was the best. The 2-strokes were getting weaker and weaker by then, and the E version of the H1 is the same as the D, but with the rubber mounted engine, and the F was done in horrible colors and had even less power because of emissions, so that’s not very desirable either. The 2-strokes just got very weak compared to before in terms of performance and desirability, because of legislation.”

Is there any Kawasaki model from that era that Rich Hobbs is still on the hunt for, though? “I never wanted a U.S./U.K. market H1B, because it’s visually exactly the same as the C, so what would be the point of having both? But they did make a Japan-only home market version in a lovely shade of red, and there’s one out there that’s been offered to me, but it’s hard to pin the seller down. That might possibly be a future addition, but I’ve got two unrestored 350 Big Horn singles, and I think I’ve run out of oomph for restoring those.”

So lastly, the inevitable question: which Kawasaki is Rich’s favorite out of all the ones he owns? “That’s impossible to answer. If I look at the whole collection, I’m really glad to own all of them, but to actually pin one down as my favorite one, I can’t! So let’s just say my favorite bike is the one I’m riding today!” **MC**

People would trip over the green bike to get to the red one, but the fact the green wasn’t really liked was what I loved about it. No one else wanted it, but I did, so this green one is the bike I’ve always had since I was a teenager. It was my first Kawasaki, but I fancied having a red one as well, so I’d been looking for 35 years for original exhausts in good condition, and I finally found a set of new old stock ones which I bought at vast expense. I then found a U.K. bike in boxes, to build up around the exhausts, which I just finished this summer, and am now currently running it in. It’s a very good bike, and I’ve built it up as close to original specifications as possible.

“Mark Hutton does all the engine work on my bikes, and I build them up in my home workshop. My motto is always to buy the best you can afford, and then you won’t be disappointed, so I use Dream Machine [dream-machine.co.uk] for the paintwork even though they’re so expensive, and they’ve always been very good. They’ve always rectified any problems immediately — so, they had a bad batch of lacquer one year, and they took both H2Cs back, and repainted them complete without the slightest quibble.”

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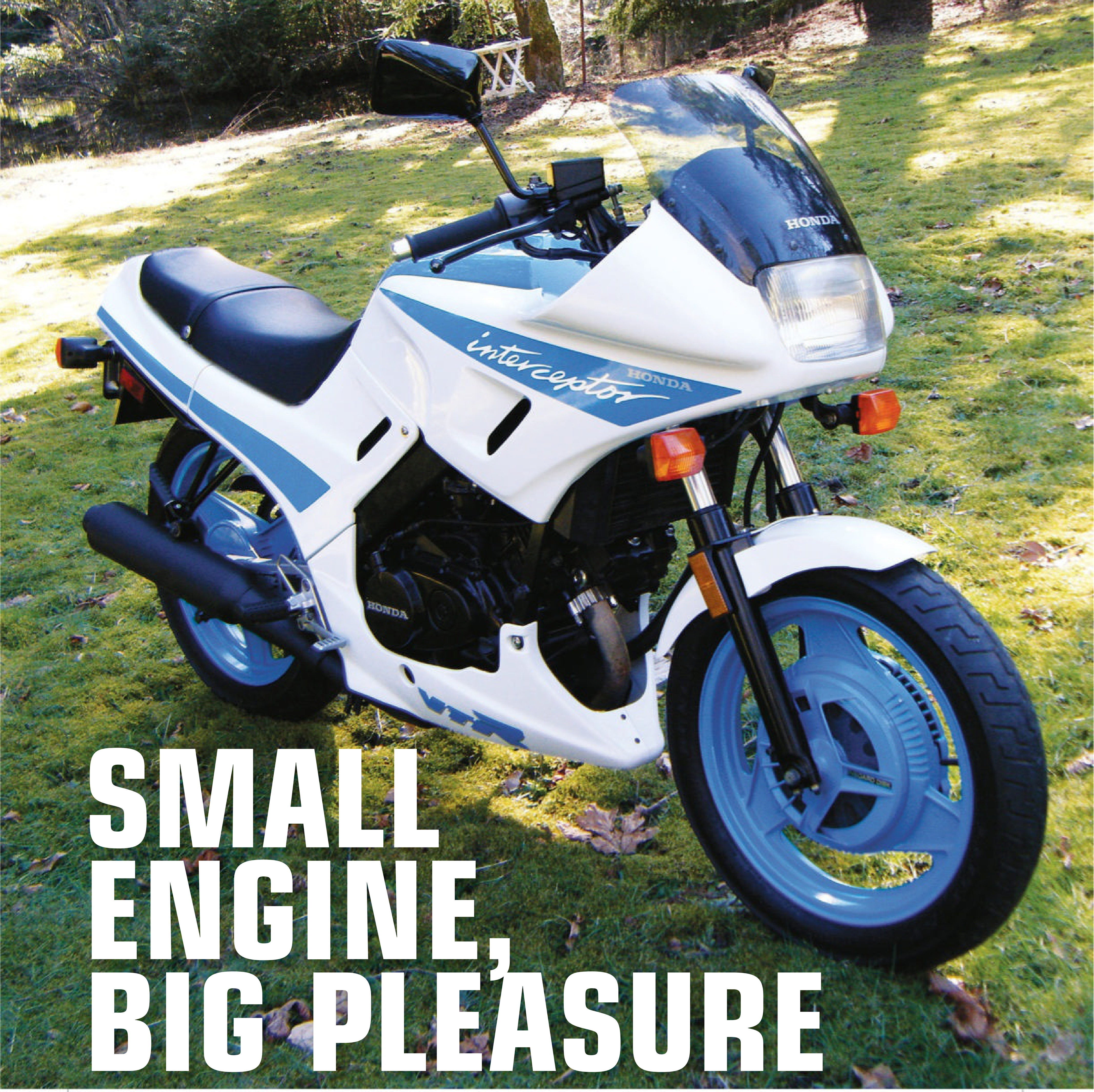


SMALL ENGINE, BIG PLEASURE

1988-1990 Honda VTR250

Story by Clement Salvadori
Photos by Ralph Noble

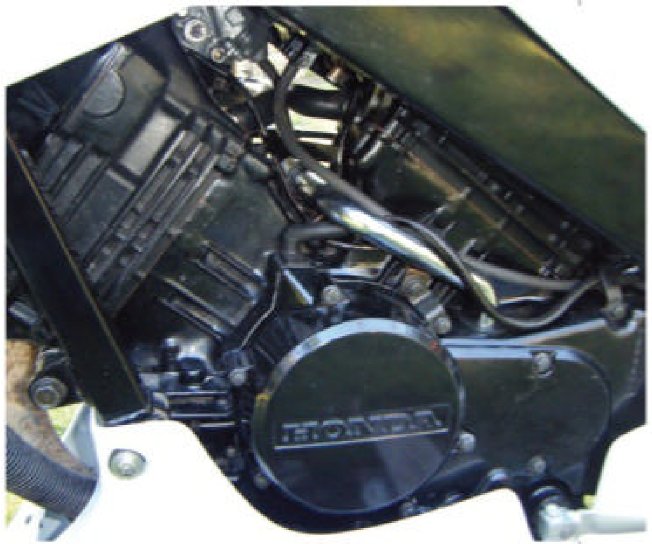
Here is a real cutie, a little 250cc liquid-cooled 90-degree V-twin, with two overhead camshafts, 4 valves per cylinder, a 6-speed transmission, and according to a *Cycle* magazine dyno test, 26 horses at 12,500rpm being sent to the rear wheel.

It's a small bike, with a modest weight of 367 pounds with a full tank of gas. Thirty years ago the average American male weighed 180 pounds, half that of the VTR. Torque maxed out at 12.8ft/lb at 9,500rpm, and one magazine made a 14.83-second pass in the quarter-mile — with no mention of the rider's weight.

The Japanese had all sorts of size limits for its own domestic market, as well as restricted driving licenses for the young. So their small-bike market was big, and since they were making these "tiddlers" why not see what the

1988 HONDA VTR250 INTERCEPTOR

Engine: 250cc liquid-cooled DOHC 90-degree V-twin, 60mm x 44.2 bore and stroke, 11:1 compression ratio, 25.9hp @ 12,500rpm, 12.8ft/lb @ 9,500rpm
Carburetion: Two 32mm Keihin CV
Transmission: 6-speed, chain final drive
Electrics: 12v, electronic CDI ignition
Frame/wheelbase: Double downtube steel frame/53.9in (1,369mm)
Suspension: 35mm telescopic forks front, single shock rear, preload adjustable
Brakes: Inboard single disc front, SLS drum rear
Tires: 100/90 x 16in front, 120/80 x 17in rear
Weight (wet): 367.3lb (166.6kg)
Fuel capacity/MPG: 3.4gal (13ltr)
Price then/now: $2,998/$1,000-$2,500



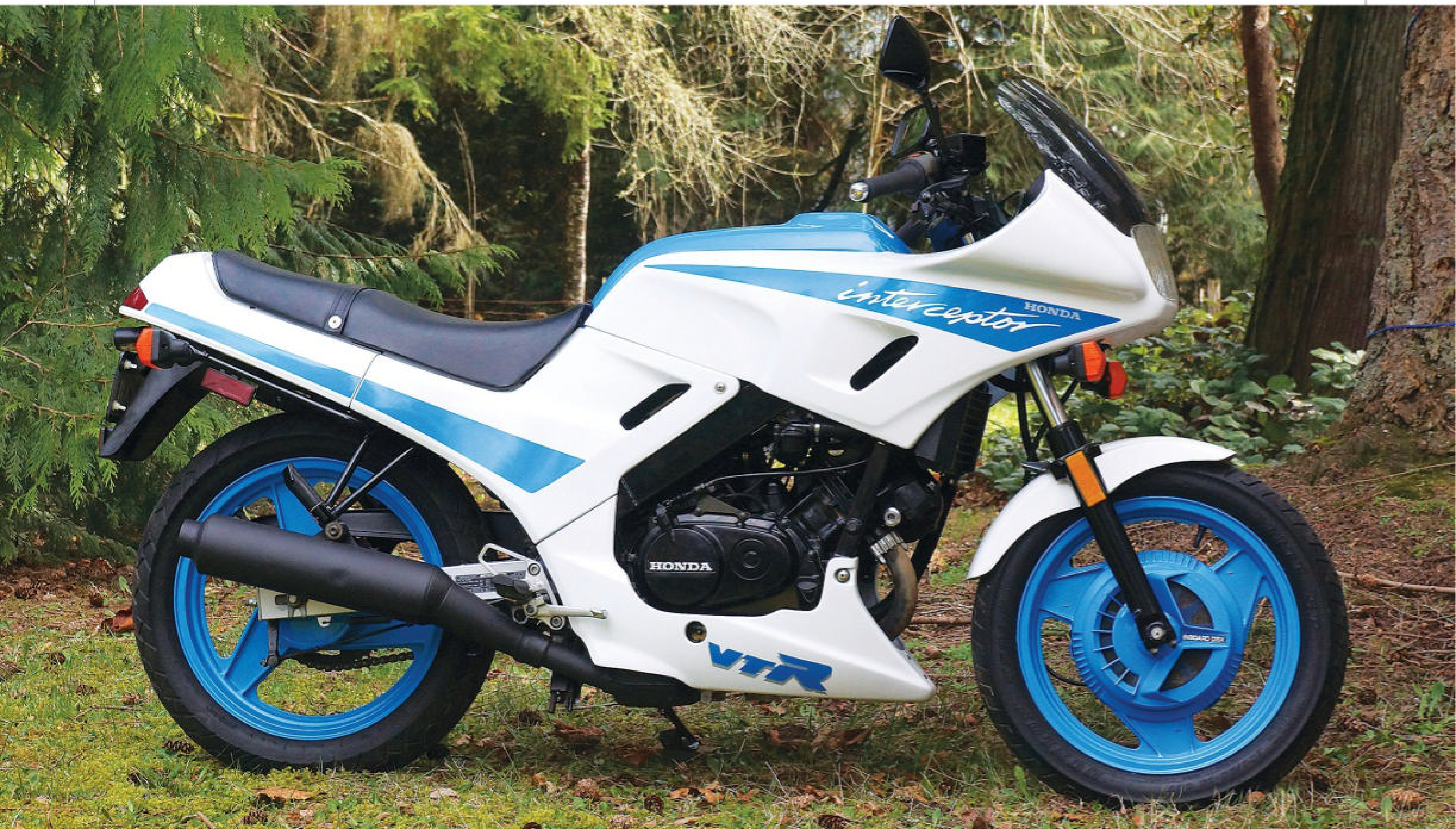
The 250cc liquid-cooled V-twin makes almost 26 horsepower at 12,500rpm, good for an estimated top speed of 90mph.

rest of the world thinks of this quarter-liter machine, which had been selling in Japan since 1983. Europe got the earlier model, the VT250 with just a headlight fairing. The full-faired version seemed appropriate for Canada and the U.S., where the spaces were large.

What was Japan doing, peddling a 250 in a country where a sporty bike needed size, like Honda's VF1000R? The Honda folk in Japan had obviously looked at the modest American success of Kawasaki's 250 Ninja, introduced in 1986, and decided it was worth a go. For that matter, Yamaha had showed up with a sporty 250 single in 1987. No word from the folks at American Honda as to how they felt about the project, though rumor had it they were not overly happy.

Interceptor no more

The first year it came out, it was called the VTR250 Interceptor, but the insurance companies were having a hard time with the go-fast name, so it was dropped in 1989. This also happened



HONDA
interceptor
VTR
INBOARD
HONDA

with the VFR750 Interceptor. And the VF1000F Interceptor. Ah, the power of a word!

It was quite a good sporty bike — for riders well-under 6-feet and 200 pounds. Cramped was a consistent word in American tests. The seat was 30-inches off the ground, but rather narrow, allowing those with shorter legs to easily touch down. Wheelbase was not quite 54 inches, and the turning radius was less than nine feet, a great plus for beginner riders. The fairing was very sporty, not the bulky touring type, and the clip-on handlebars were an easy reach from the saddle. As was the instrument panel with a speedometer going up to 115mph, and a tachometer running to 14,000rpm. The tach was a little more honest than the speedo, as the engine could easily rev to 13,500, while a genuine top speed is hard to find. The white-collared fellow in the office could calculate that with the gear ratio of the sixth speed running at 13,500rpm, top speed would be 110mph — while a more realistic figure would be 90mph or so.

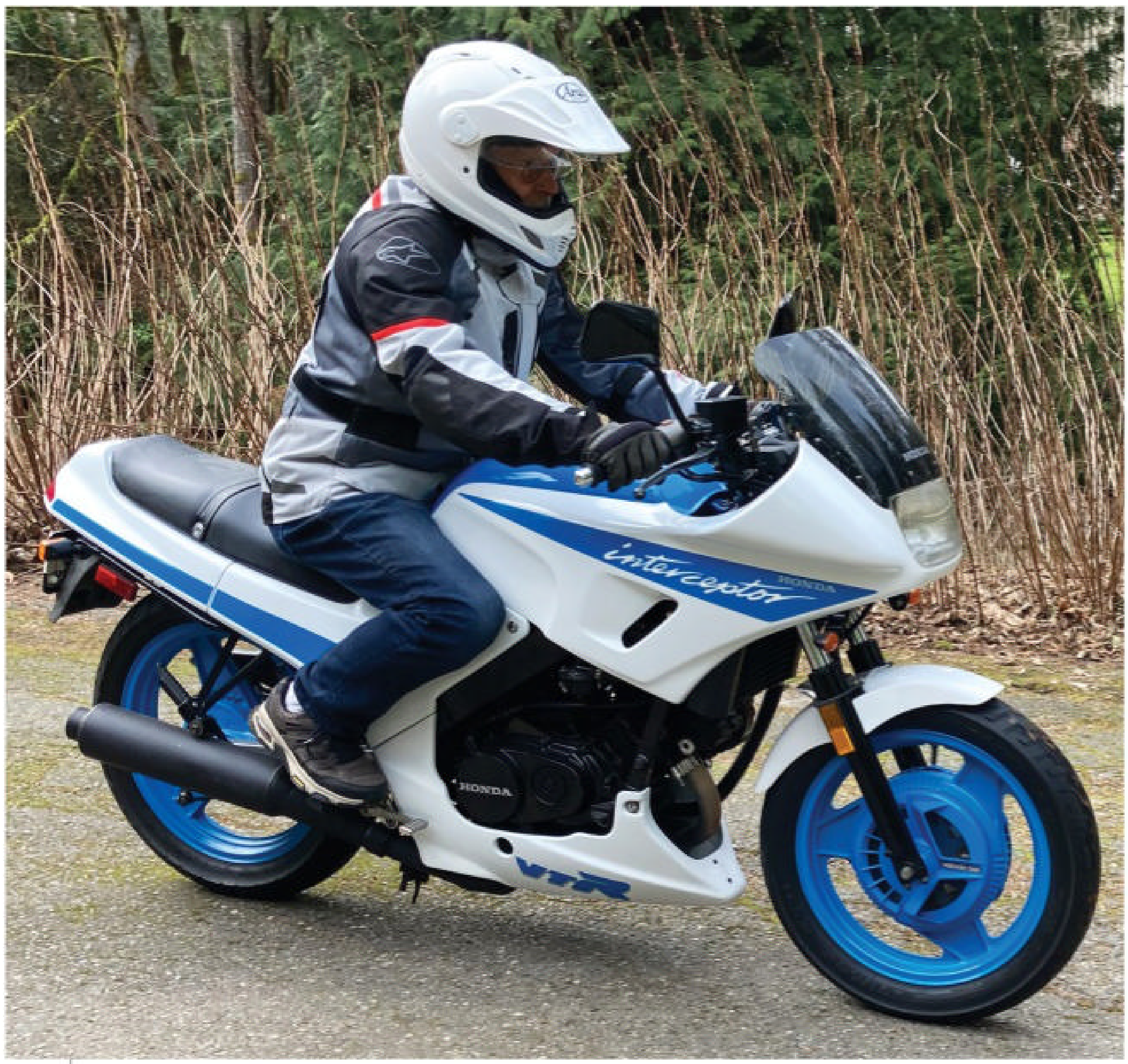
Frame and suspension

The diamond-style frame was steel, the upper part being two rectangular arms angling down about 25 degrees going past the fuel tank and the air cleaner and then to the pivot for the box-section swingarm. A few small pieces went backwards to support the rear fender and seat. A pair of downtubes angled from the steering head down to the front of the engine, which served as a stressed member of the chassis. The Showa front forks had 35mm tubes which centered on the axle, a sporty 26.1-degree rake, and almost 4 inches of trail. They were air-adjustable, but unfortunately lacked a cross-over tube, so they had to be pumped separately. Travel was a shade over 5 inches. At the back was a single Pro-Link shock with adjustable spring preload and almost 4 inches of travel.

The three-spoke cast wheels were quite a sight, loudly painted in blue for the '88 year. A rod-actuated drum brake was mounted to the 17-inch rear wheel, while the front 16-incher ... what was at the front? It looked like a big ventilated drum. That was Honda's inboard disc system, a single-disc arrangement first seen on the 1982 VT250F. While some people said it was designed to improve brake performance and feel, others maintain it was merely a styling touch. It was well-ventilated with a twin-piston caliper using floating mounts. It worked, but by 1990 the VTR250 had a 17-inch front wheel with a conventional disc brake.

And the powerplant? The 90-degree V-twin engine was almost a perfect 250cc, with an oversquare bore of 60mm and a stroke of 44.2mm. When an engine can rev to 13,500rpm, oversquare is good. Two chain-driven overhead camshafts sit on each cylinder, operating the four valves in each head. A convenient aspect for the home-mechanic was that valves were adjusted with the help of a screw driver,

HONDA
interceptor
VTR
Ralph Noble, from Keyport, Washington, with his VTR.



Ralph heads out for a ride aboard his sharp 1988 VTR250 Interceptor.

though getting access required some work. Needless to say, bits and pieces were quite small, as opposed to the VTR's big brother, the VT1100 Shadow, which came with a single overhead camshaft and only three valves per cylinder.

Fuel was kept in a 3.4 gallon tank, passed through a pair of 32mm constant-vacuum Keihin carburetors, and into a combustion chamber where it was compressed 11 times over, then fired by a transistorized electronic ignition. Straight-cut gears ran the power back to a wet clutch assembly, operated by a hydraulic mechanism. And then a constant-mesh transmission with half a dozen gears, having a ratio of 23.17 in first to 8.78 in high. A #530 chain ran out to the rear wheel on the Interceptor, changed to a lighter #438 in 1989.

Turn the key, push the button, put her in gear, let out the clutch, and away you went. The perfect primary balance gave a smooth ride, with a gentle noise at low rpm, cruising around town at six to eight thousand revs. However, get out on your favorite back road, up the throttle, and there would be some genuine caterwauling at 13,000rpm. The good suspension kept the tires where they were supposed to be, and nothing scraped in the corners. Good fun, especially for the riders who were light of weight and small of frame.

Price? A mildly pricey $3,000, $400 more than Kawasaki's 250 Ninja. But worth it, as the Honda had better suspension, and a better look. MC

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Photo of Dave Roper by Bill Burke

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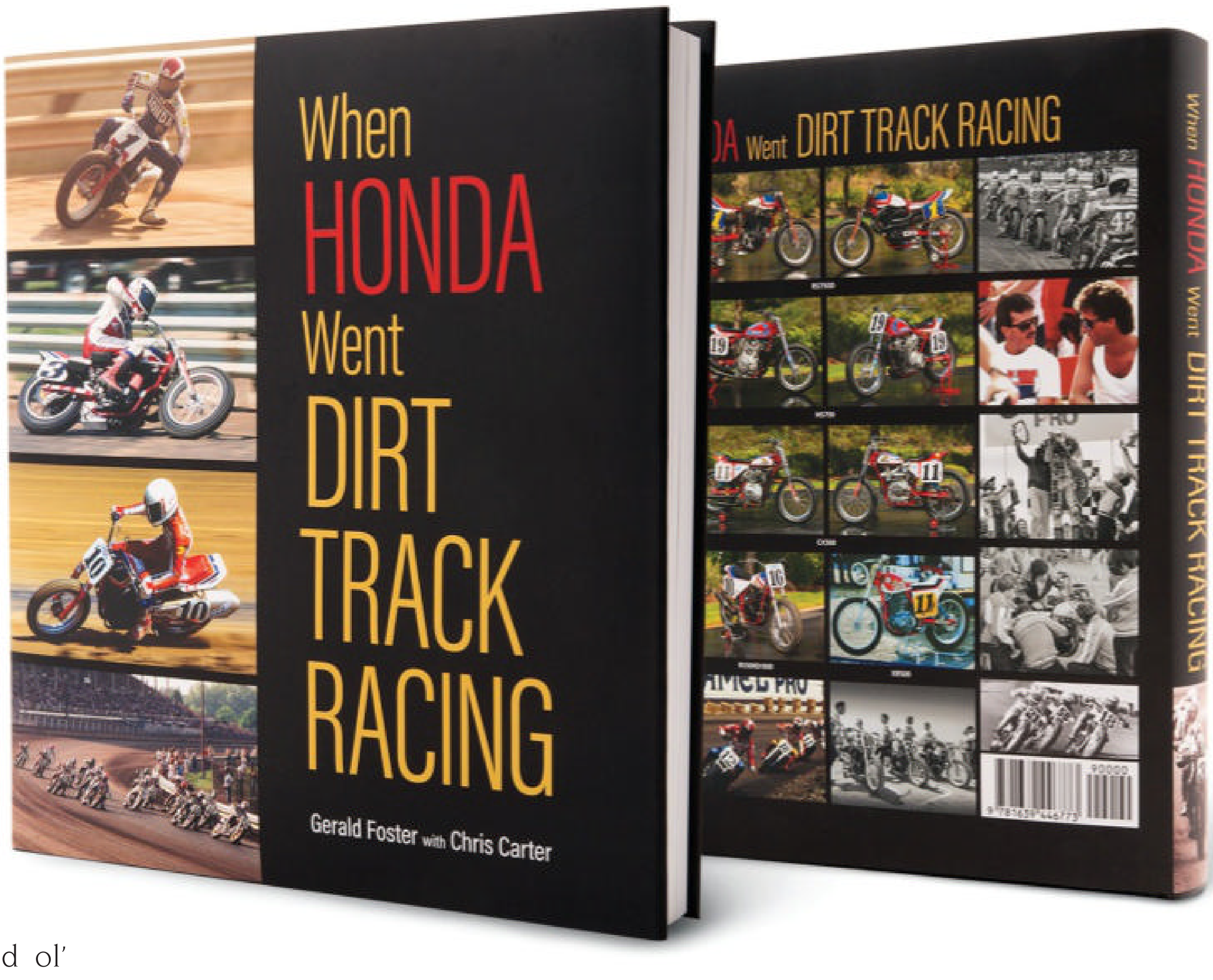
When Honda Went Flat Track Racing

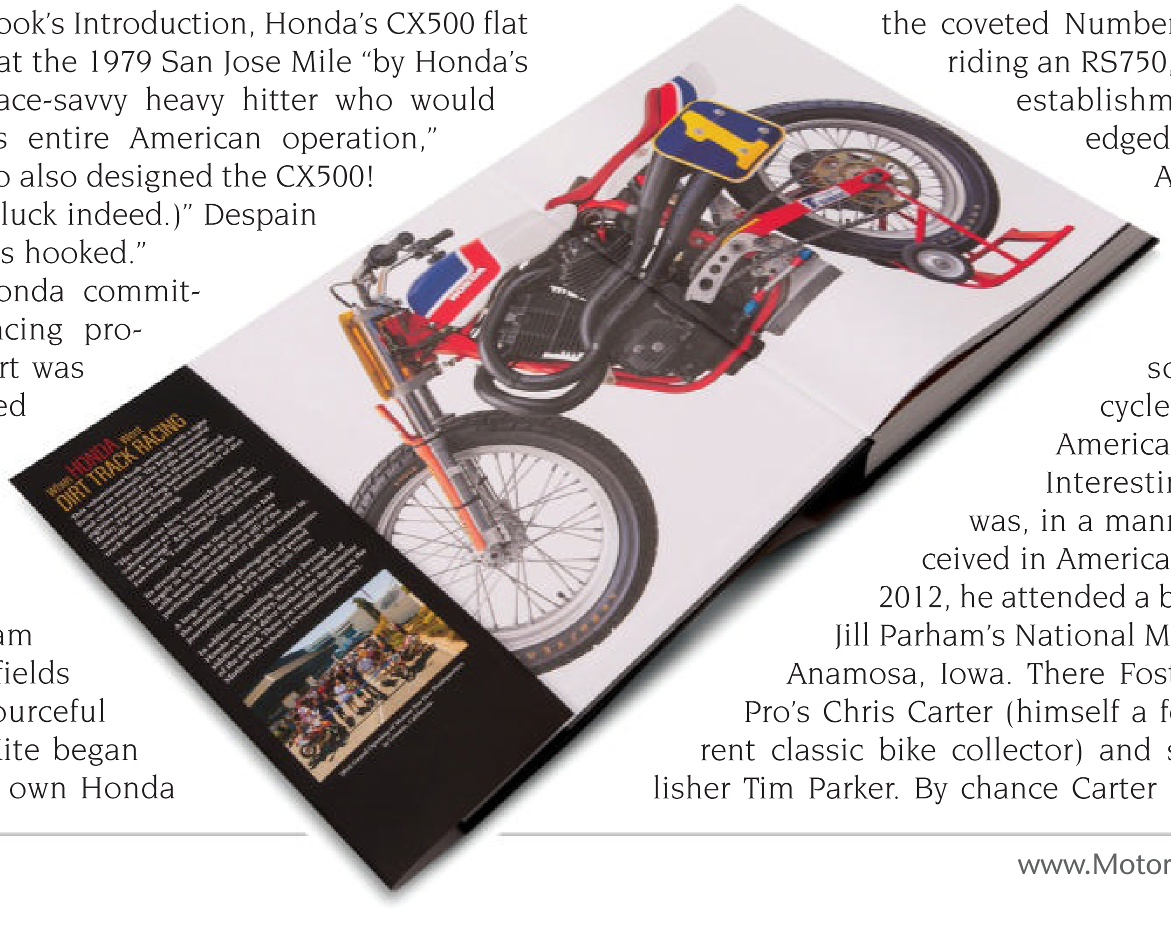


Before we discuss Gerald Foster's (with Chris Carter) book *When Honda Went Dirt Track Racing* — truly a titanic tome packing 544 pages within hardbound covers measuring 12 3/8-inches by 11 1/4-inches and weighing a hefty 7.25 pounds — we should talk about the real elephant in the room. That, of course, is that flat track racing is an American sport dating back to (seemingly) the early days of dirt itself.

Honda? Well, it's a motorcycle (and automotive) company that originated in Japan back in 1948, not doing business on these shores until mid-1959. And during that span of 11 years every racer to win the AMA Grand National Championship did so riding a Harley-Davidson.

Not even Honda's celebrated 1970 Daytona 200 win (Dick Mann on a CB750) could elevate the company's Grand National Championship status among AMA hierarchy because that single race was on pavement, not good ol' 'Merican dirt. It wasn't until 1979 when Mickey Faye, riding a modified Honda XR500, won the TT National at the Houston Astrodome that the Japanese company finally made inroads into dirt track racing. And, almost on cue, Honda answered the siren song with a rather peculiar and unorthodox V-twin racer based on its CX500 street model.

That concoction led to Honda's flat track addiction. As Dave Despain relates in the book's Introduction, Honda's CX500 flat track racer was spotted at the 1979 San Jose Mile "by Honda's Shoichiro Irimajiri, a race-savvy heavy hitter who would eventually run Honda's entire American operation," wrote Despain, "and who also designed the CX500! (Coincidence and good luck indeed.)" Despain continued, "Irimajiiri was hooked."



And so American Honda committed to a dirt track racing program in 1979. That effort was essentially spearheaded by Jerry Griffith's personal pursuit of converting a Honda CX500 for flat track racing, and by chance, another CX500 program popped up in the cornfields of Iowa when a resourceful engineer named John Kite began experimenting with his own Honda CX500-based flat track racer (see *Motorcycle Classics*, July/August, 2018). The race was on, so to speak, even though neither builder was aware of the other's project at that time.

Finally, on June 5, 1982, Scott Pearson won the Louisville Half-Mile on a bored and stroked CX500 re-named NS750. But it wasn't until Ricky Graham won the coveted Number One Plate in 1984, riding an RS750, that the AMA racing establishment fully acknowledged Honda as a player. And that's the premise of this book: Honda winning one of the oldest and most sought-after motorcycle championships in America.

Interestingly, Foster's book was, in a manner of speaking, conceived in America's heartland when, in 2012, he attended a bike show at John and Jill Parham's National Motorcycle Museum in Anamosa, Iowa. There Foster met with Motion Pro's Chris Carter (himself a former racer and current classic bike collector) and seasoned book publisher Tim Parker. By chance Carter had one of his early

Honda flat trackers on loan to the museum, and, well, one thing led to another until Foster (an expatriated Englishman and retired American Honda employee) was convinced by Carter and Parker that writing a book about Honda's flat track racing endeavors was a good idea; after you read this book, you, too, will agree that it was, indeed, a good idea. It's not a stretch to say that *When Honda Went Flat Track Racing* is the most comprehensive work on the topic.

Foster's narrative is truly complete, treating readers to plenty of big and insightful photos (color and black & white, many at the hands of expert lensman Bert Shepard). Photos reveal race action and technical detail of race bikes and riders, accompanied by clippings from period magazines, plus full race reports from *Cycle News* describing the action as it unfolded on the racetrack.

When Honda Went Flat Track Racing
By Gerald Foster, with Chris Carter
Hardbound, 544 pages, 12 3/8" x 11 1/4"
Published by: Chris Carter, Motion Pro, Inc. 2021
$224.99, available through Motion Pro's website: motionpro.com

Perhaps the real jewels to be found in the book are the 60-plus interviews of American Honda team members and other people associated with the racing, and of people involved in subsequent years. These voices give a true sense of what happened during that unforgettable time.

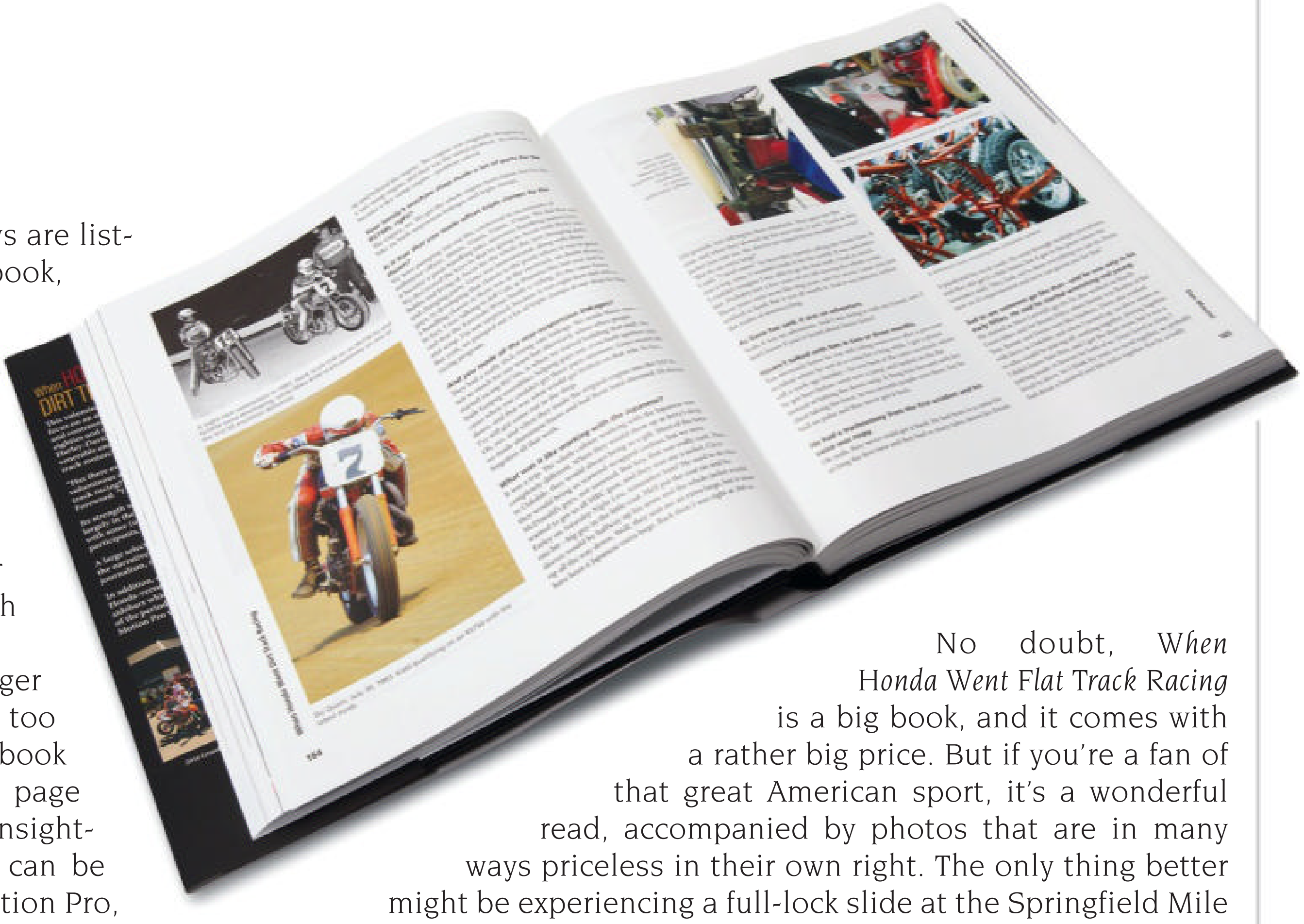
Moreover, Foster took care to thoroughly edit each interview before returning a working manuscript to the interviewees for proofreading and confirmation before publication. Doing so assures readers that there's no confusion (other than the occasional time-lapse memory fog that, in itself, is a part of life's experiences) about what took place and when during Honda's flat track success that culminated with four straight AMA Grand National Championships (Ricky Graham, 1984, and Bubba Shobert 1985-'87) plus Graham's seemingly magical title in 1993 when, as a privateer for John and Sarah Goad, he posted a remarkable 12 National wins.

Foster's interviews start with the beginning days when Dennis McKay served as American Honda's director of racing. It was under his management that American Honda began its flat track program (with a modified XR500 single on which Jeff Haney consistently beat Harley XR750s at weekly Ascot meets) that eventually led to Graham earning Number One. Foster follows that with the nearly insurmountable number of interviews, ranging from Griffith and Kite's early CX500 ventures to the riders and insiders such as Graham's parents and girlfriend Regina Smith (who, ironically, was the first Miss Harley-Davidson, 1983 and '84). Teammate Shobert tells his story, plus various sponsors, vendors and privateers, and other players who helped support Honda RS750 racing efforts recall their involvement.

> “If you’re a fan of that great American sport, it’s a wonderful read.”

It’s easy reading, too. The interviews are listed in page order at the front of the book, making it easy to chase down some of your favorite people from that era to read about their experiences with Honda’s racing program. Sadly, some players, although they were interviewed for the book, are gone and missed today. Gene Romero, Graham and his bike tuner Sparky Edmonston, and Jerry Branch are among those that I knew.

The book could have been even larger than it is, but the printer warned that too many pages might lead to a broken book spine, so Foster and Carter cut the page count at 544. Additional articles and insightful information that missed the cut can be accessed online through a link via Motion Pro, bit.ly/WhenHonda



No doubt, *When Honda Went Flat Track Racing* is a big book, and it comes with a rather big price. But if you’re a fan of that great American sport, it’s a wonderful read, accompanied by photos that are in many ways priceless in their own right. The only thing better might be experiencing a full-lock slide at the Springfield Mile — and living to tell about it. — *Dain Gingerelli*

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HOW-TO

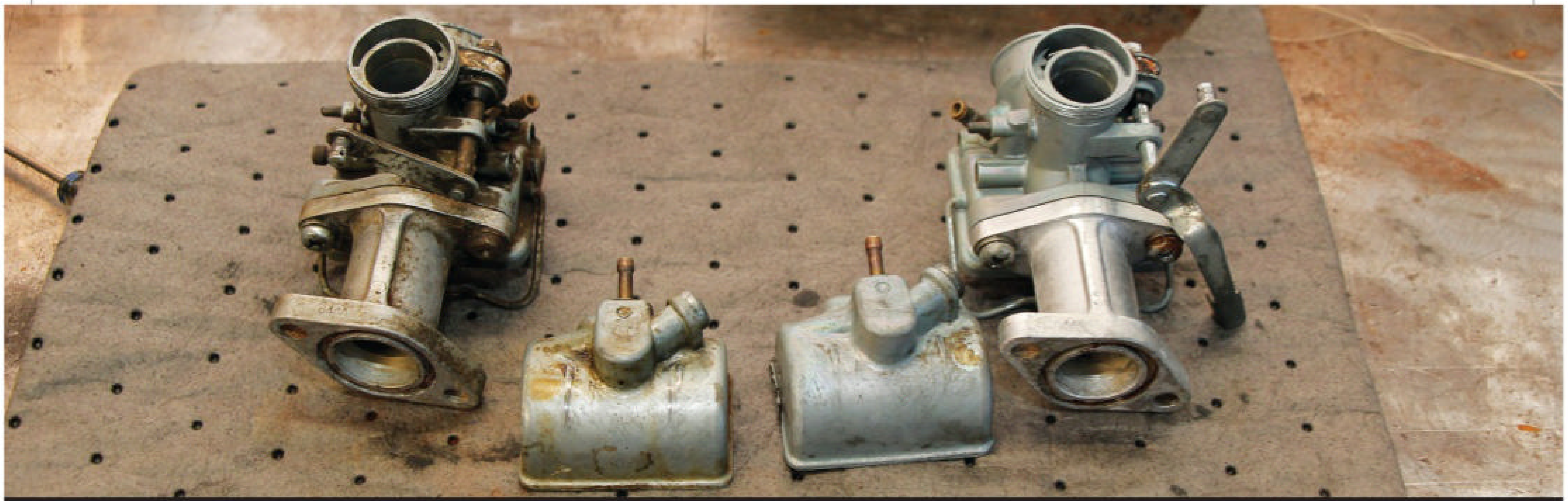
Our bike for this project is a 1971 Honda CB175. Shown are the carb rebuild kits from Moto-Vintage.net.

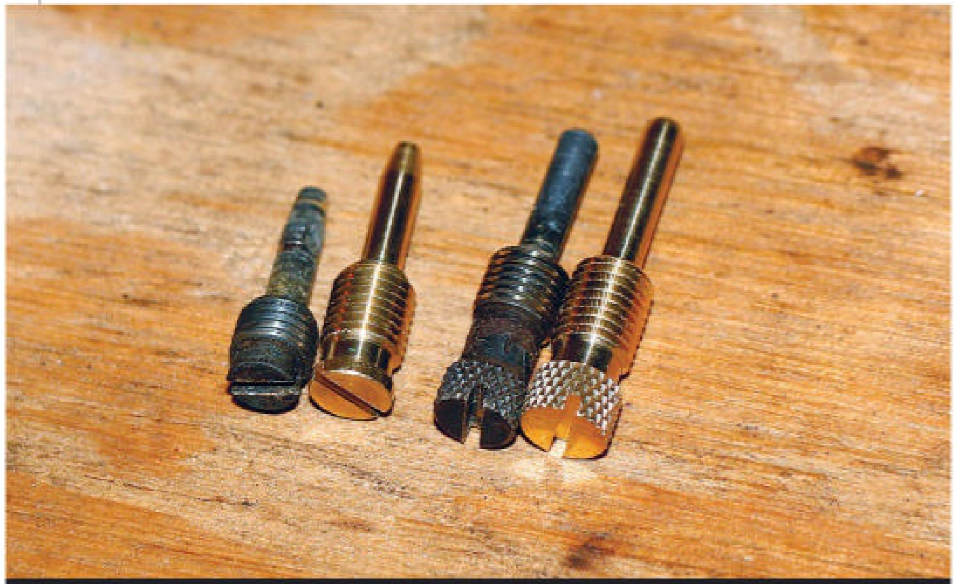
Reviving a long-dormant Honda CB175, Part 2

Last issue we got the gas tank clean and the carburetors off the bike and disassembled. This time we're going to clean the carburetors and reassemble them with some new parts. We got our rebuild kits from Matt Wiley at Moto-Vintage.net.

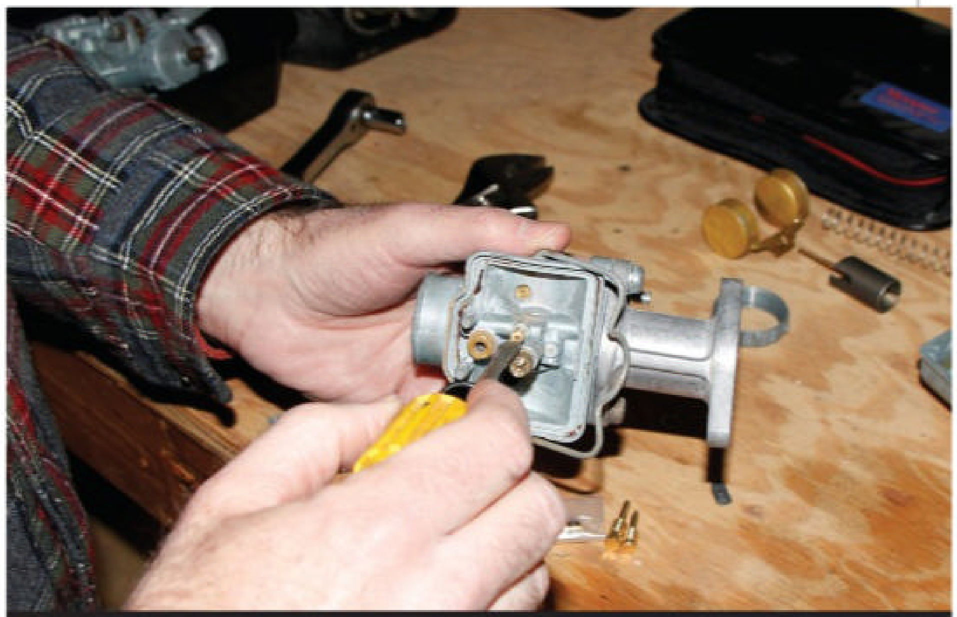
The jets don't suffer any appreciable wear in use, so you can use the factory jets if you want. We are fortunate enough to have use of an Ultrasonic cleaner, so everything goes in for a 15 minute heated shake in a dilute mix of Simple Green and water. Carburetor cleaner is another option. Gloves and good ventilation are a must if that's what you use.

— Keith Fellenstein

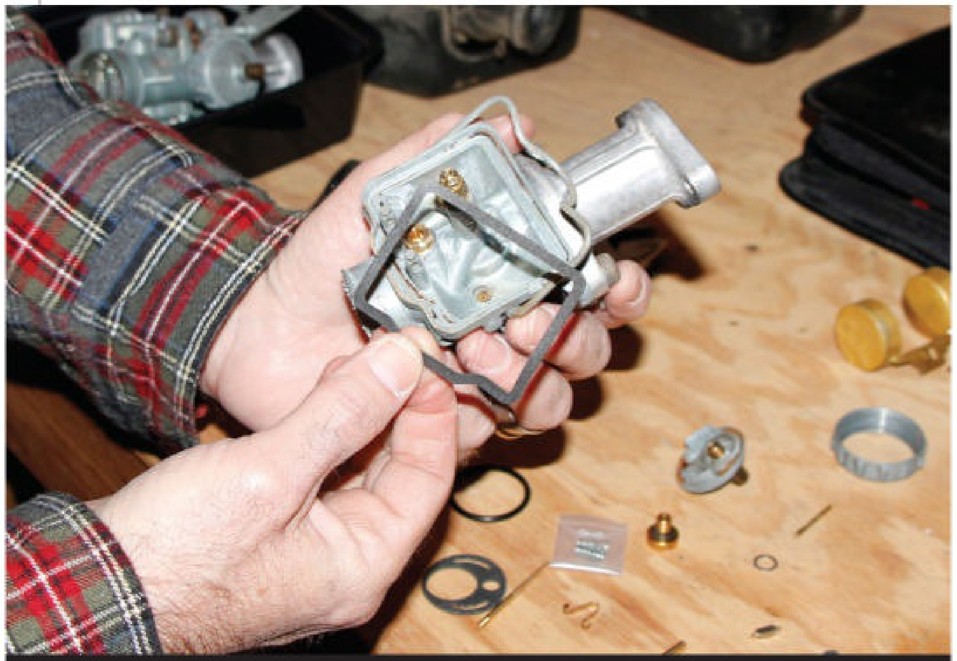

1 The first step is to clean all the castings and the jets if you are reusing them. On the left, a grungy carb, as removed from the bike. On the right, a clean carb after the Ultrasonic bath.



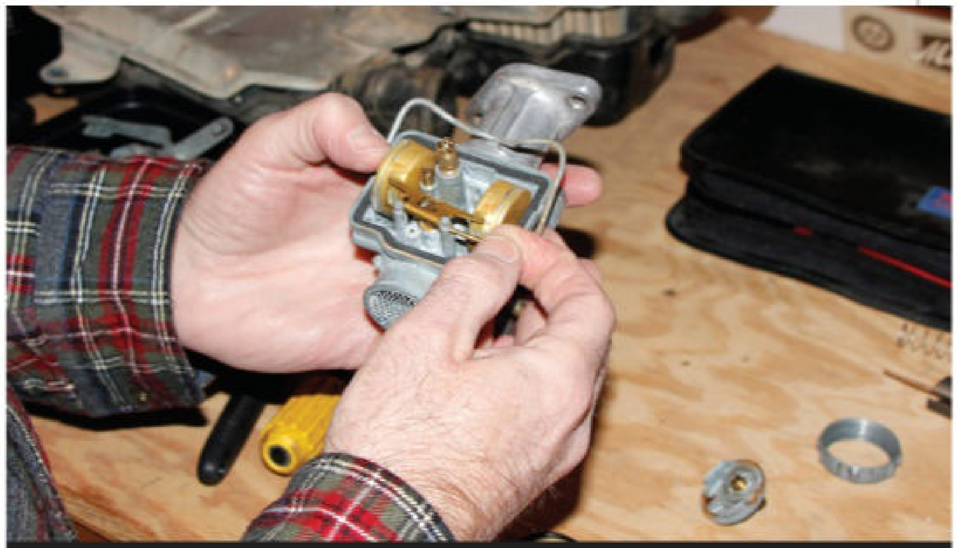
2 Carefully check your replacement parts against the original parts. Although most of the replacement parts in our kits were exact replacements, the idle mixture screw and the throttle stop screw were not, and we opted to use the originals.



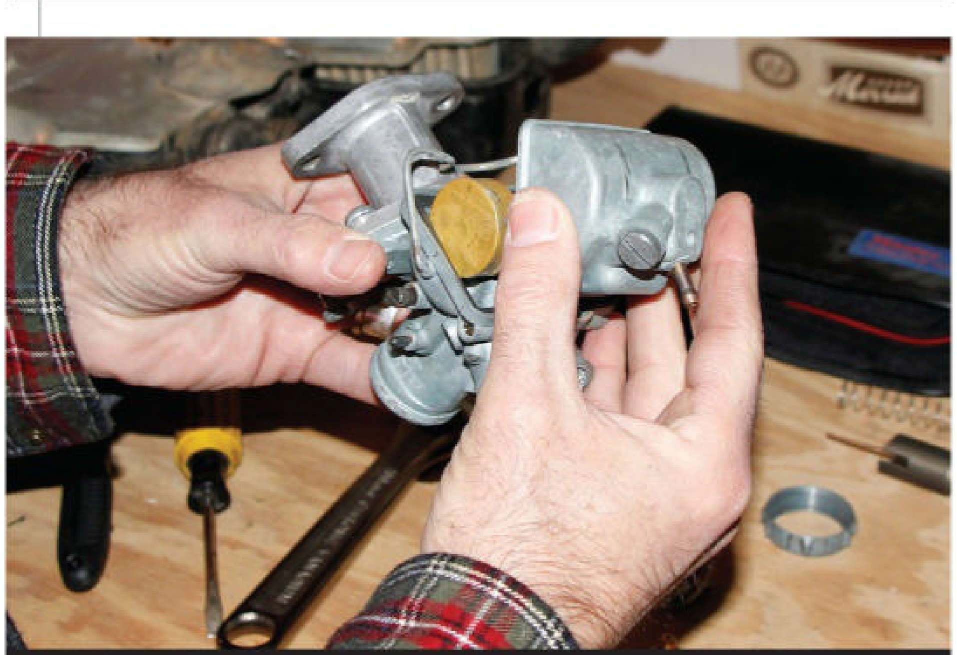
3 Using the appropriate sized tools, install the idle jet, atomizer, main jet, and the float valve seat. Don't forget the aluminum crush washer under the float valve seat.



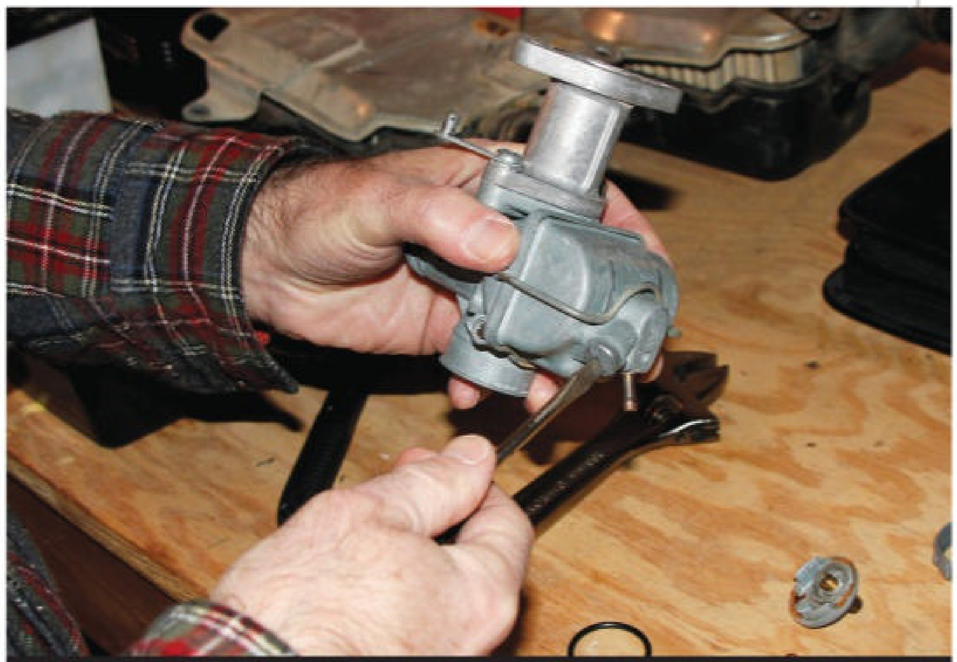
4 Install the new float bowl gasket.



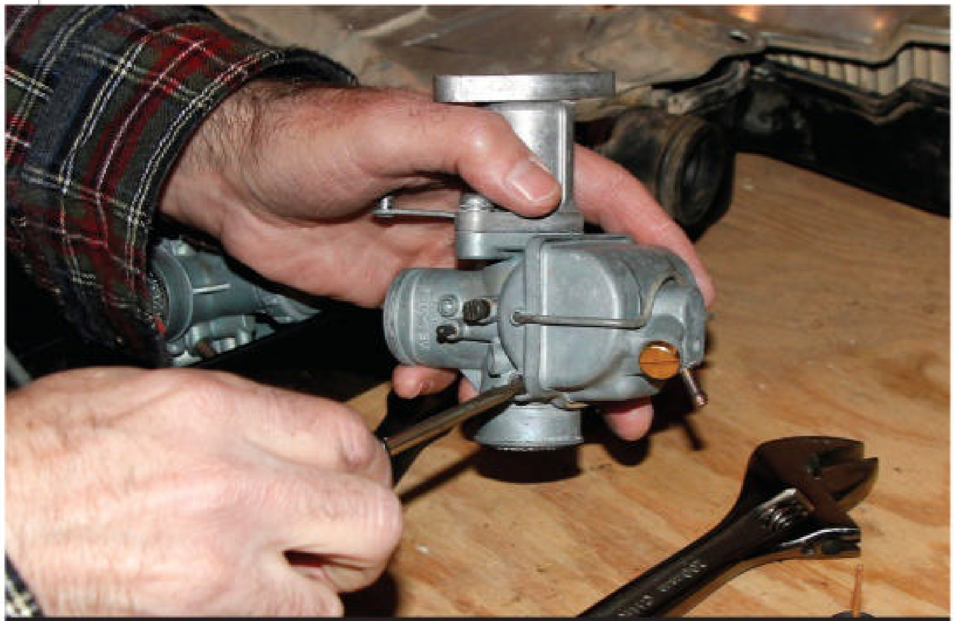
5 Install the float needle and floats and slide the retaining pin in place. Check the float heights. Often you won't have to make any changes if you just replaced parts. Factory settings are usually measured with the gasket removed, so keep that in mind too.



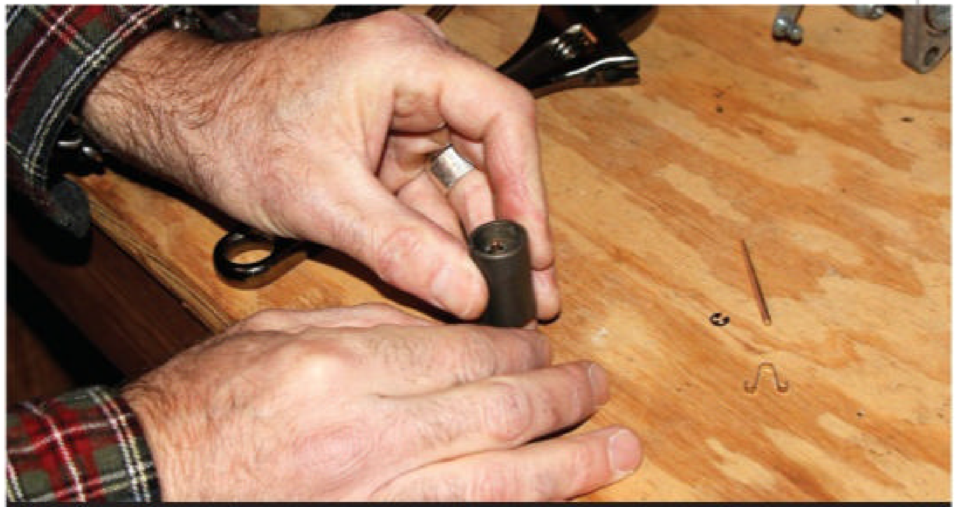
6 When the floats are set correctly, install the float bowl on the new gasket. Make sure the retaining clip is on the correct side of the bowl to be slid into locking position after the bowl is placed.



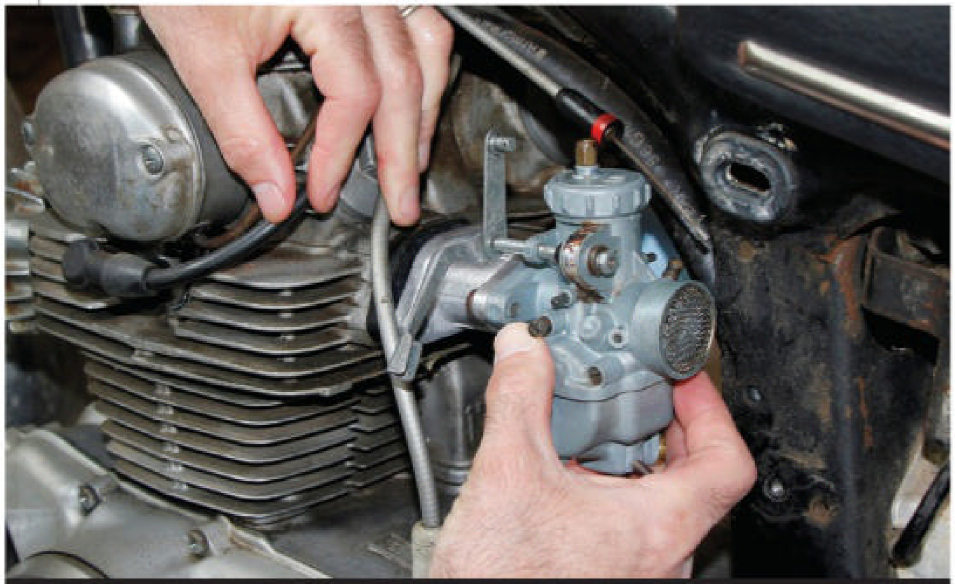
7 With the float bowl locked in place, you can replace the bowl drain screw and O-ring with the new drain screw and new ring.



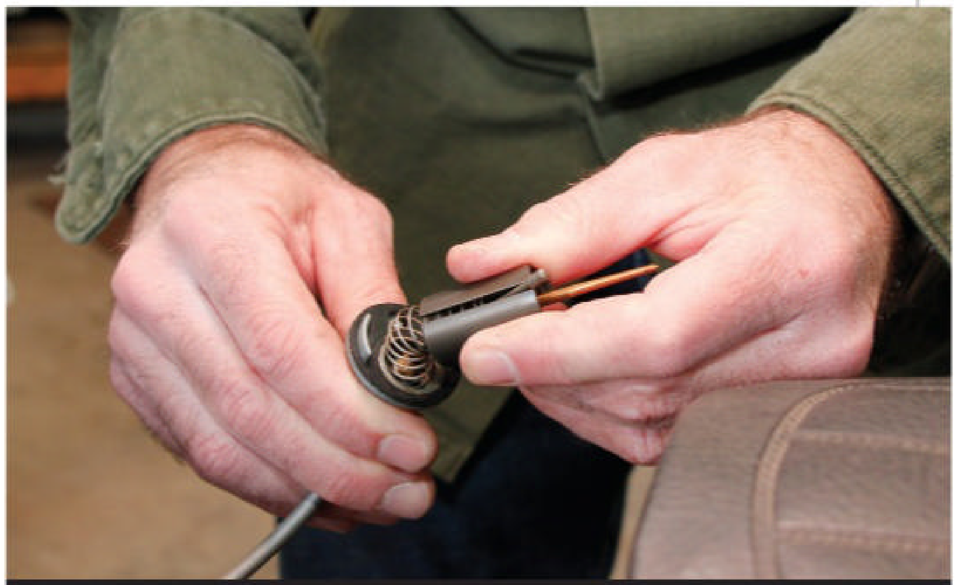
8 Reinstall the idle mixture screw and lightly seat it, then back it out 1½ turns. That's a good starting point for idle mixture adjusting. Install the throttle slide screw and spring too.



9 Reinstall the throttle needle with the e-clip in the middle notch, then use the hairpin spring to secure the needle in the slide. Put the slides back in the carburetors and adjust the slide stop screw until the slide just starts to rise, then ½ turn more. This will give you a starting point for final idle adjustment and synchronization.

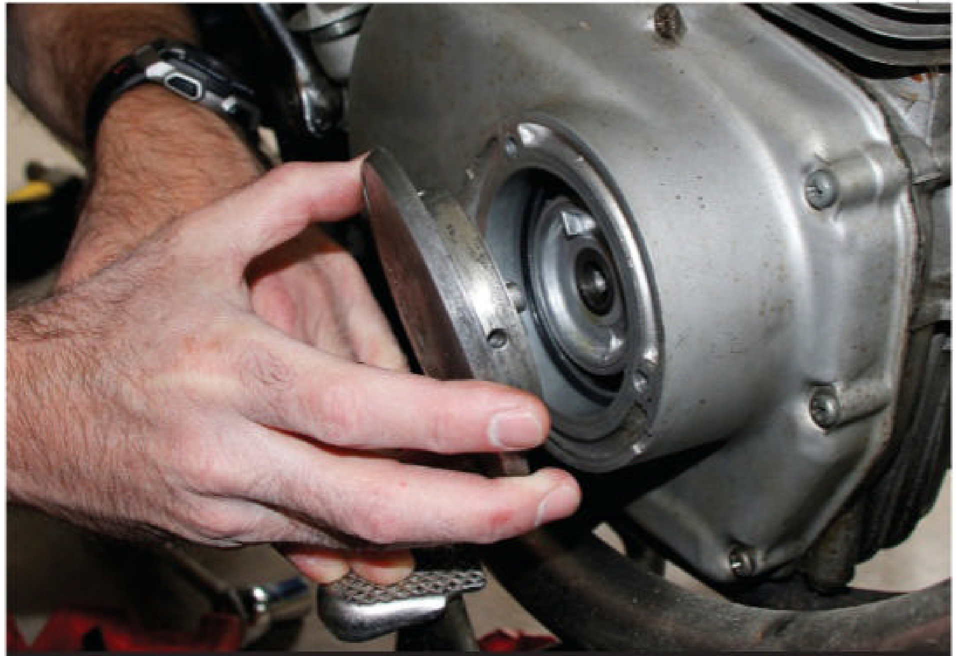


10 Bolt the carburetors back on the bike. Refer to our previous how-to if necessary and just reverse the procedure. Replace the choke linkage, washers and cotter pins that connect the chokes.

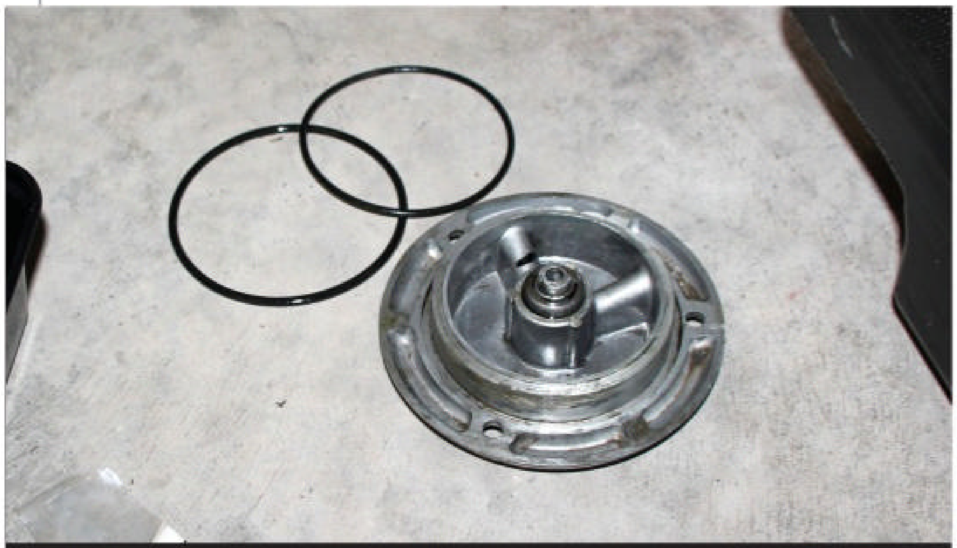


11 Remove the tops and slides. Position the top nut and carburetor top on the cable and then reinstall the slide on the throttle cable. Set the slides back into the carburetors and secure the top nut.

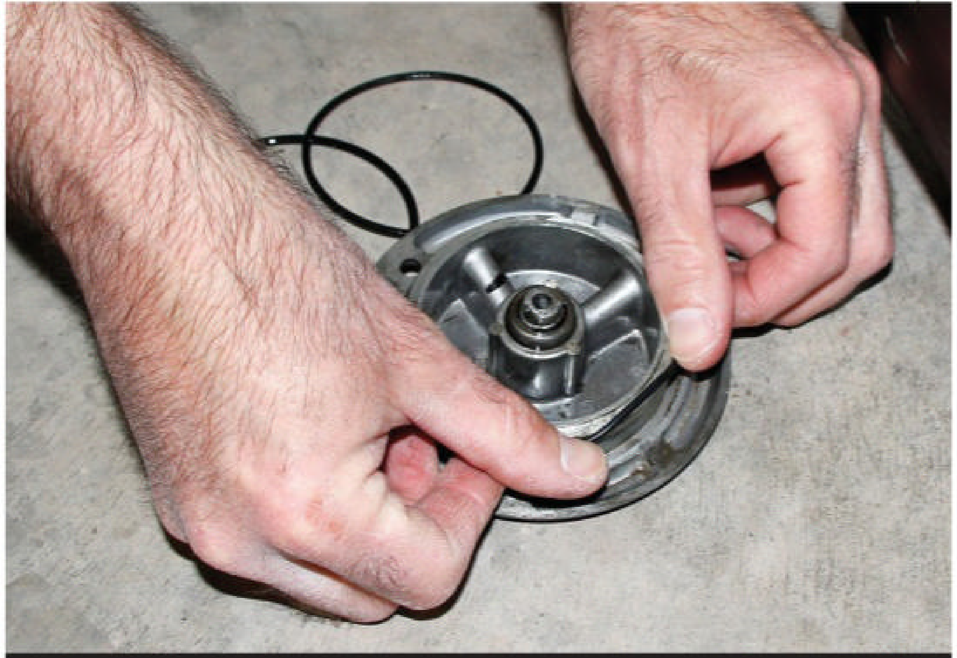
12 Now that we've got the fuel system clean, it's time to check the oiling system and change the oil. We're going to remove the cover of the primitive oil filter and inspect it. We're using an impact driver to loosen the screws to avoid damaging the screws. If you have the proper JIS screwdrivers you may not need this step.



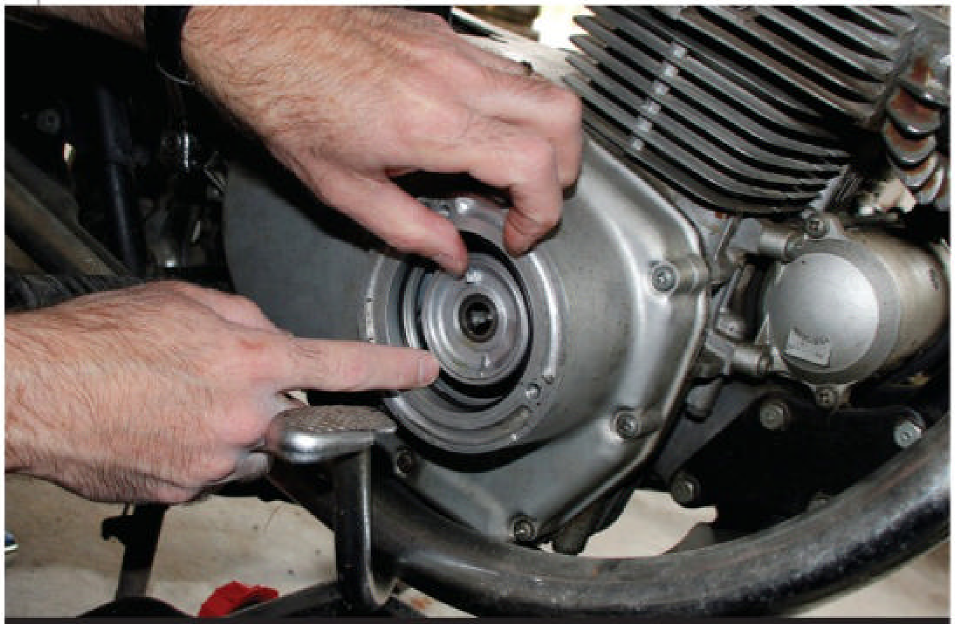
13 After loosening the three cross-point screws holding the cover in place, carefully pry it off using the slots provided in the engine case. Easy does it.



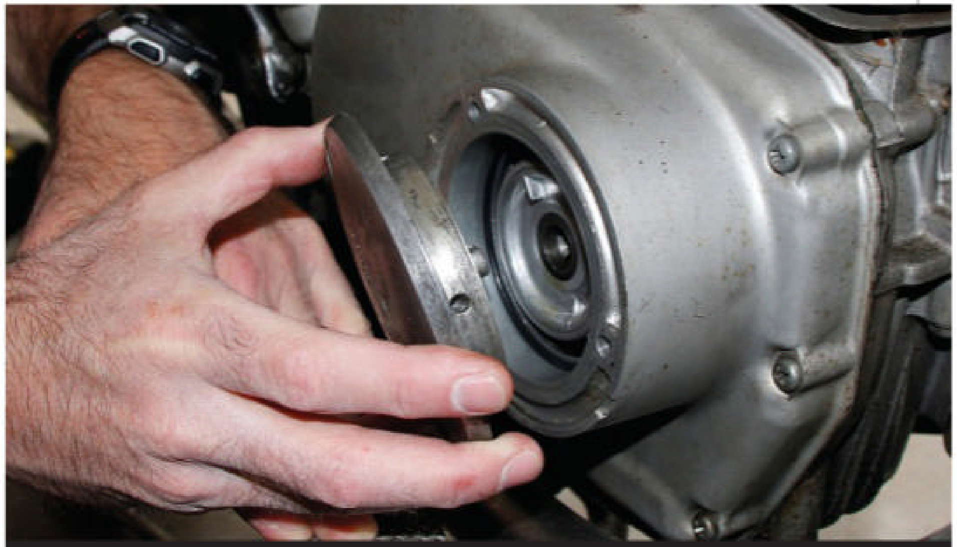
14 There are two O-rings that seal the cover to the engine case. Be sure you replace them both. They form a pressure seal that sends oil to the camshaft that runs in the aluminum head. I've seen too many heads ruined by leaving out an O-ring here.



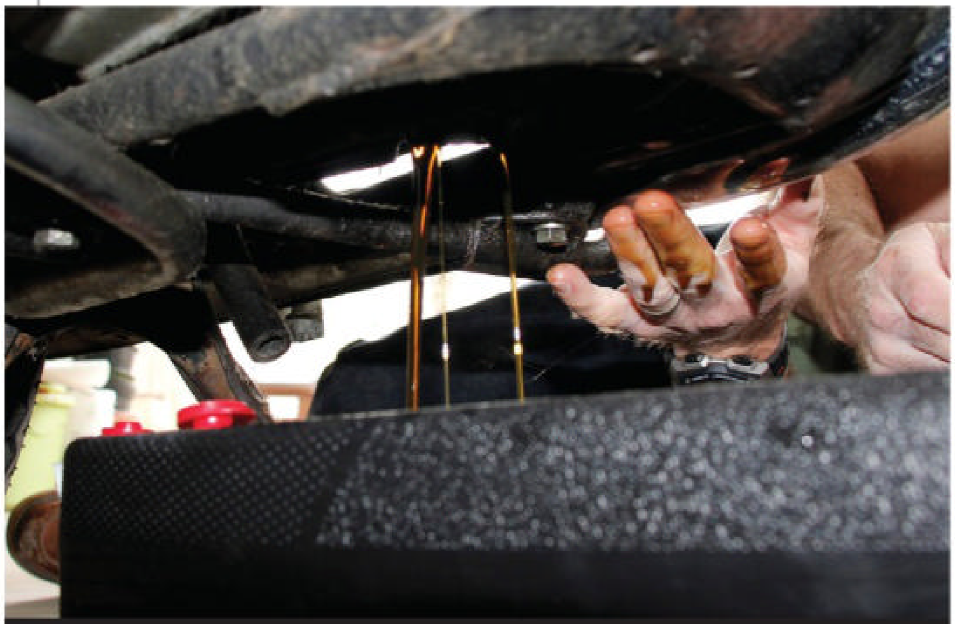
15 The larger of the two O-rings should be rolled into place over the cover and seated in the groove in the base.



16 I find it easier to place the smaller O-ring in the cavity of the engine case. Use a little grease to stick it in place if it wants to wander.



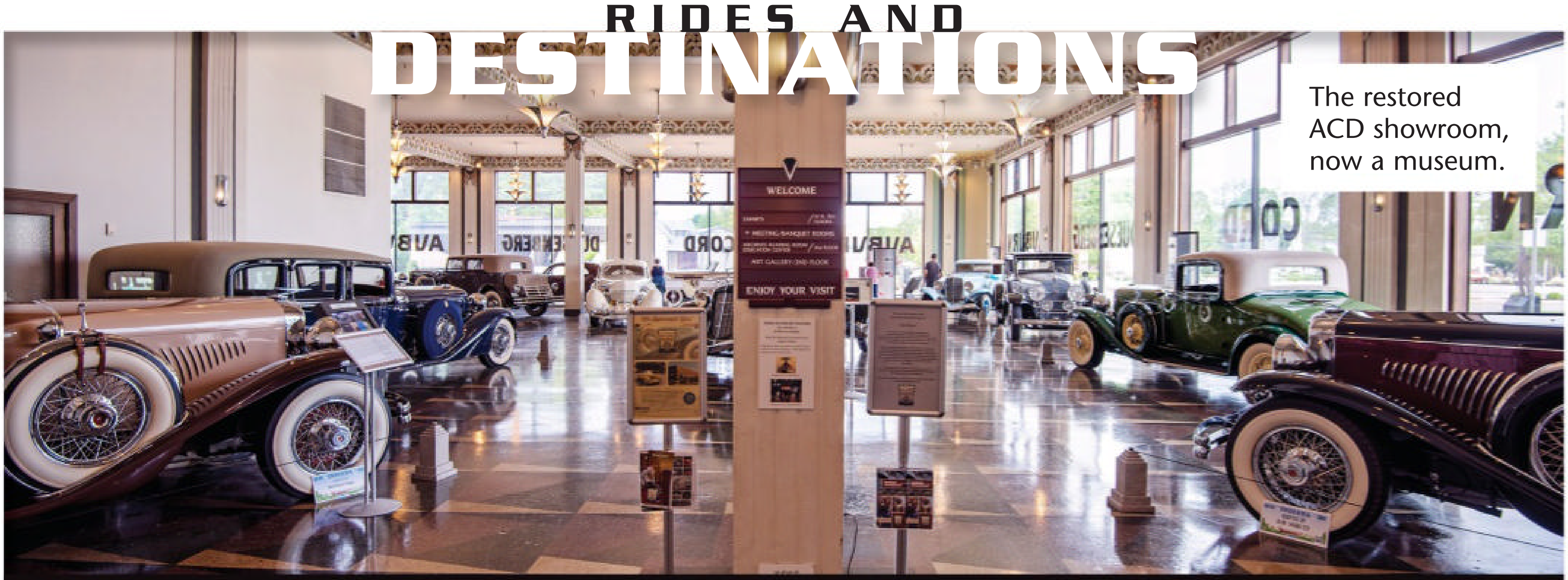
17 Replace the cover, making sure the two holes in the cover match up with the holes in the engine case. The cover screw holes are not drilled exactly 120 degrees apart, so if you get the cover on and they don't all line up, you've got it out of position.



18 Move on to draining the oil. Many times this drain plug will be over tightened, so some extra force may be needed to loosen it. Make sure you have a large drain pan at the ready to catch all the oil.

19 The dipstick lists the correct amount and weight of oil needed to refill the crankcase. Once you have refilled it, check the level with the dipstick. That's going to wrap it up for this episode, next time we'll finish it up and go for a ride.

RIDES AND DESTINATIONS


The restored ACD showroom, now a museum.

THE AUBURN CORD DUESENBERG AUTOMOBILE MUSEUM, AUBURN, INDIANA

The Auburn Cord Duesenberg Automobile Museum, in Auburn, Indiana, houses a collection of more than 120 vintage vehicles, several aircraft engines, a single vintage motorcycle, and the Cord Corporation restored offices and automobile showroom. Located 140 miles northeast of Indianapolis, the museum was a convenient stop for us as we made our way north to Goshen to visit with Janus Motorcycles and their modern vintage Halcyon 450 (see *Motorcycle Classics*, September/October 2022). Auburn, population 14,000, is an interesting town that loves its automotive culture. During our visit, we observed vintage cars being used as daily drivers and several buildings downtown with classic automobile wall murals. It is a cool place.

We did not know it at first, but there is a connection between the three marques included in the Auburn Cord Duesenberg Automobile Museum's name. They were all managed from the very building that is now the museum. Here is a quick recap of how it came to be: The Auburn Automobile Company built its first automobile in 1903. In 1919, a group of Chicago investors (including William Wrigley, of chewing gum fame) purchased the Auburn Automobile Company. Duesenberg, originally located in New Jersey, moved its operations to Indianapolis in 1921. That same year, Auburn hired a successful young salesman named Errett Lobban Cord, who became the Auburn president in 1926. Cord purchased Duesenberg, hired Duesenberg brothers August and Fred, and appointed Fred Duesenberg Auburn's Vice President of Engineering. Mr. Cord created the Cord Corporation in 1929 (with the Duesenberg and Auburn companies as subsidiaries), and the newly named Cord Corporation started producing Cords (the first mass-produced front wheel drive cars in America). In 1930, the Cord Corporation built a 100,000-square-foot headquarters in Auburn that included its engineering and executive offices and a stunning art deco showroom. It was this building that would become the museum.

The early 1930s were the Cord Corporation and Auburn's golden era (in fact, the town became known as Little Detroit). Cord had more than a hundred dealers and its best year ever in 1931, building 34,000 automobiles, but things quickly went south. Auburn and Duesenberg production ended in 1936 and Cord production ceased with a bankruptcy filing the following year. Several owners followed, including the Marshall Clothing Company, an organization that tried but could not sell the corporate headquarters building. The Auburn Automotive Heritage group formed in 1969 and started raising funds with the intent of restoring the headquarters building as a museum. While this was occurring, the building became a motorcycle shop in 1973. After a 1974 fire Auburn Automotive Heritage purchased the building and created the museum. It became an Indiana State Historic Site in 1992 and a National Historic Landmark in 2005. The one vintage motorcycle mentioned above is a 1933 250cc single-cylinder BSA, Mr. Cord's personal motorcycle. Cord kept the motorcycle on his Nevada ranch and on his yacht.

We thoroughly enjoyed our visit and found the museum to be a most worthwhile destination. You can easily spend three or four hours in the museum; an entire day there would not be out of the question. It is that interesting. — *Joe Berk*

THE SKINNY

What: The Auburn Cord Duesenberg Automobile Museum, 1600 South Wayne Street, Auburn, Indiana, 46706, (260) 925-1444. Open every day from 9 a.m. to 5 p.m. Admission is $12.50, with discounts for larger groups and children.

How to Get There: From Indianapolis, take Interstate 69 north to Auburn. From Detroit, take I-94 west to I-69 south. From Chicago, take I-90 east to I-69 south.

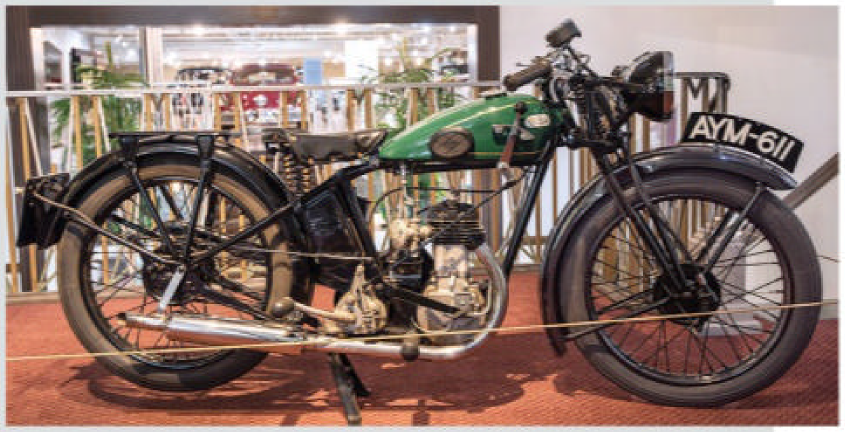
Best Kept Secret: It is not really a secret: In 1933, John Dillinger and his gang successfully raided the local police station for its firearms and ammunition stash.

Don't Miss: Sandra D's, a reasonably priced Italian restaurant in Auburn with an exquisite menu. Try the eggplant parmesan; you will not be disappointed.

Avoid: Arriving without a camera. There are memories and automotive icons in these hallowed halls you will want to keep.

More Info: automobilemuseum.org

More Photos: bit.ly/ACDAMuseum



Mr. Cord's 1933 BSA, the lone bike in the museum.

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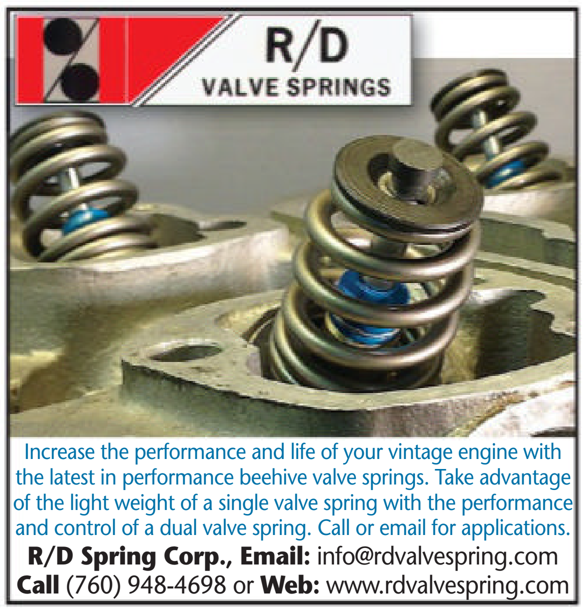
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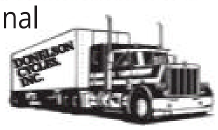

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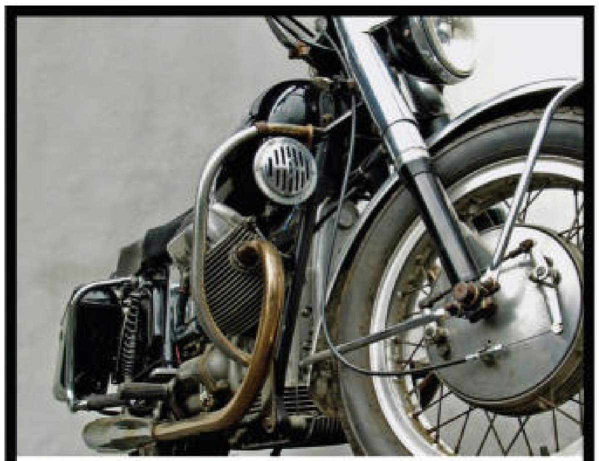

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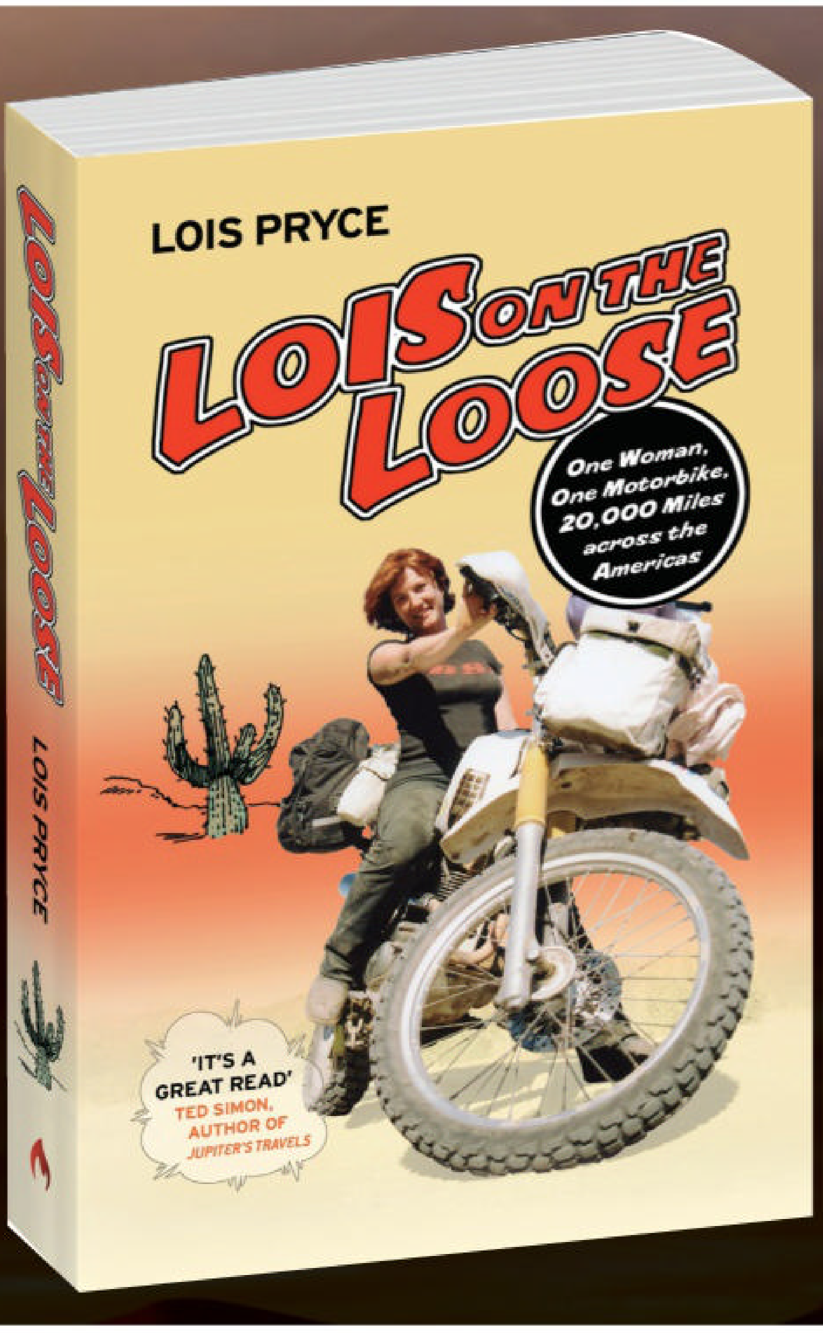
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LOIS ON THE LOOSE
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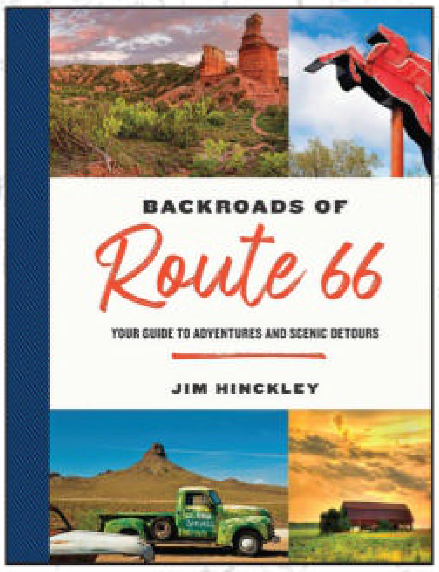
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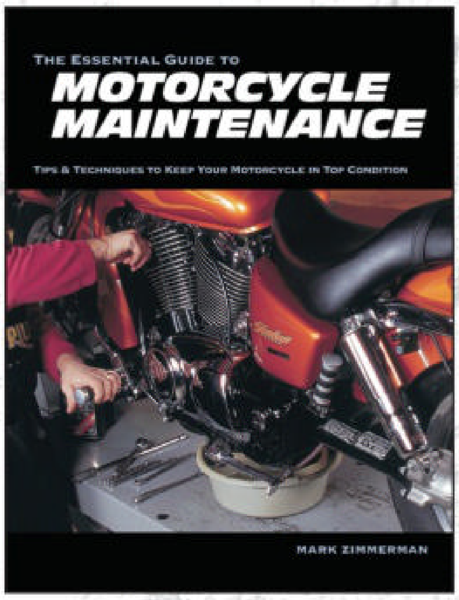
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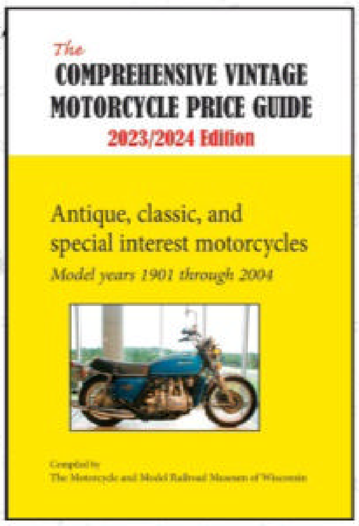
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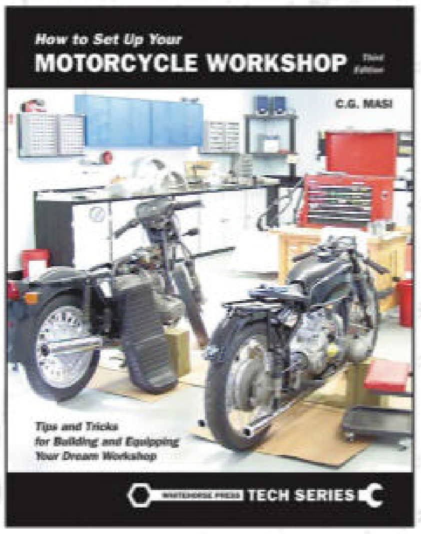
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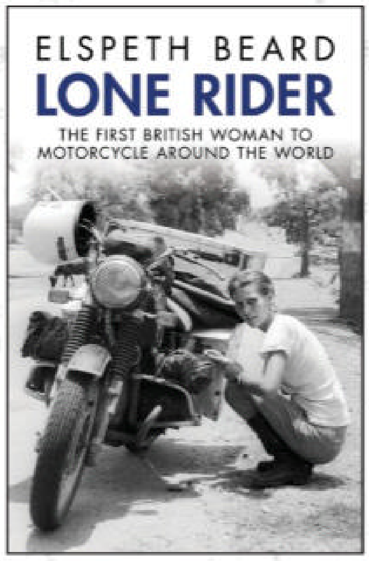
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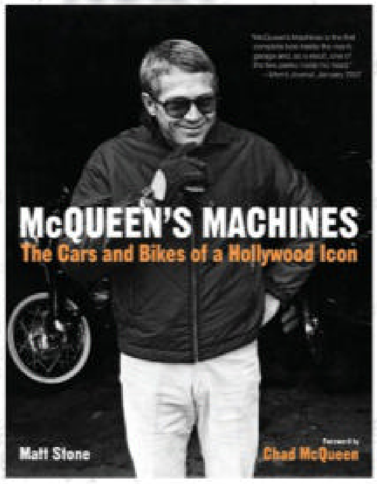
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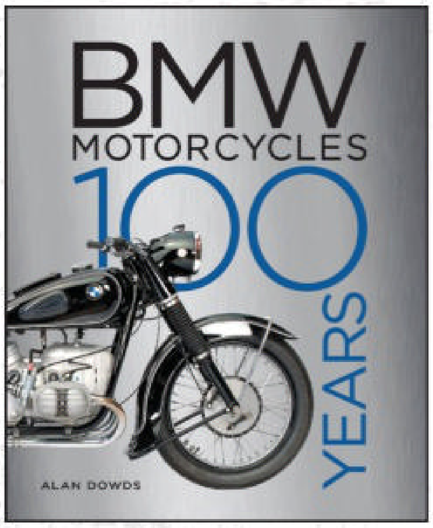
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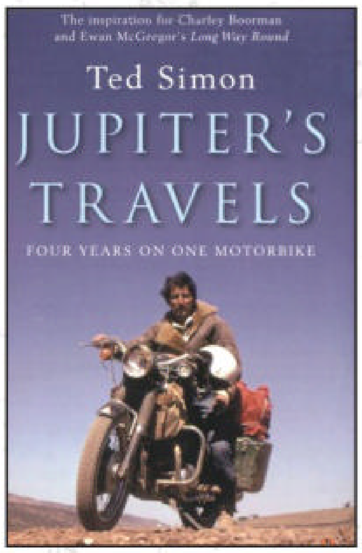
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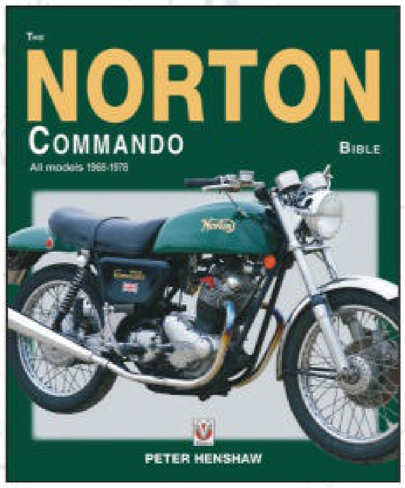
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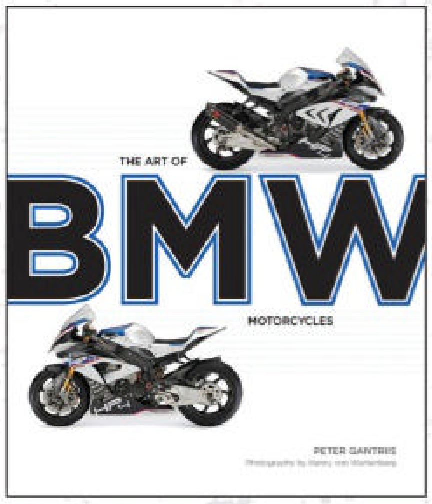
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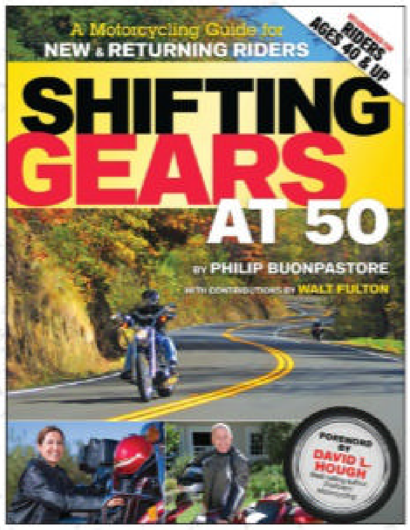
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WITH CONTRIBUTIONS BY WALT FULTON
FOREWORD BY DAVID L. HOUGH

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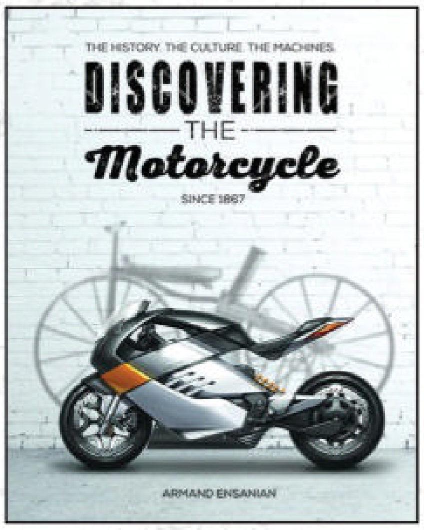
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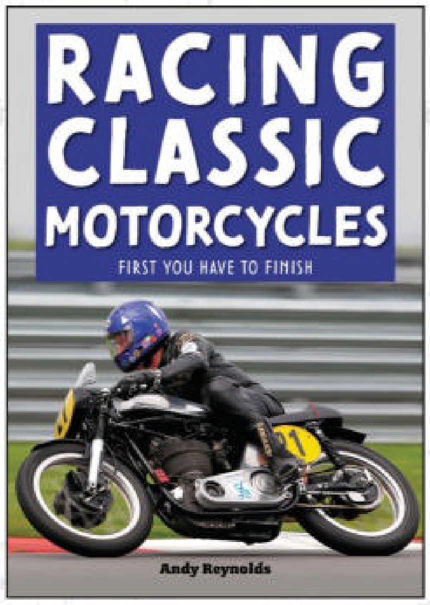
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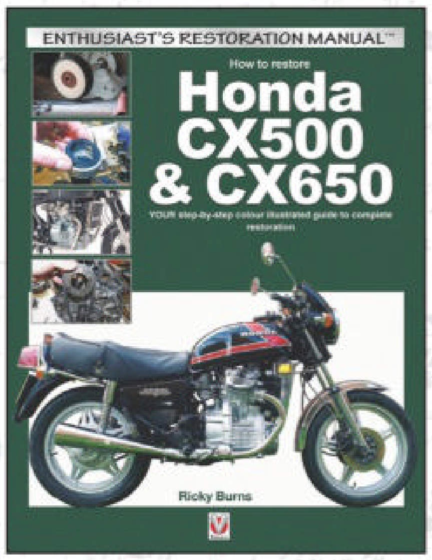
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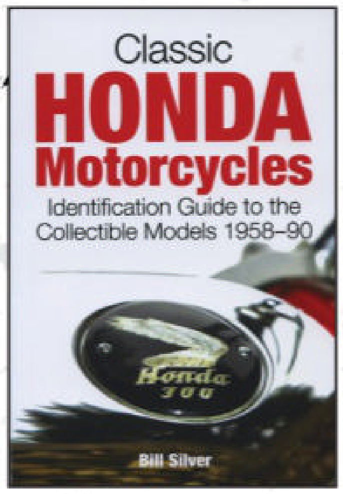
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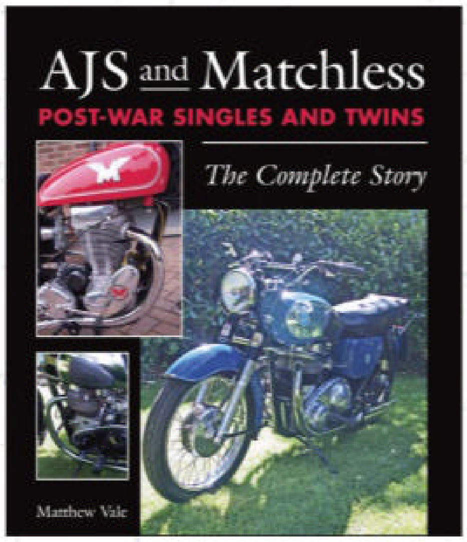
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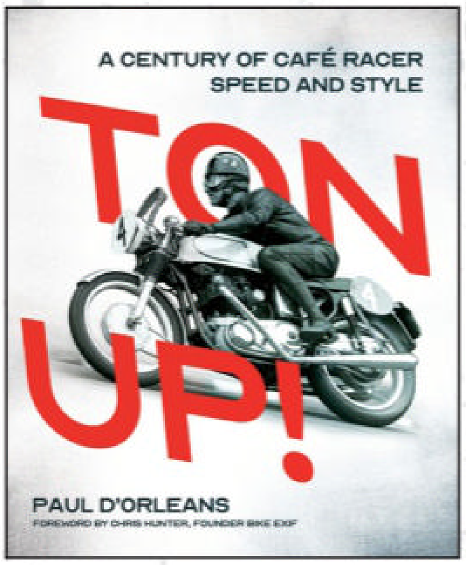
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TON UP!
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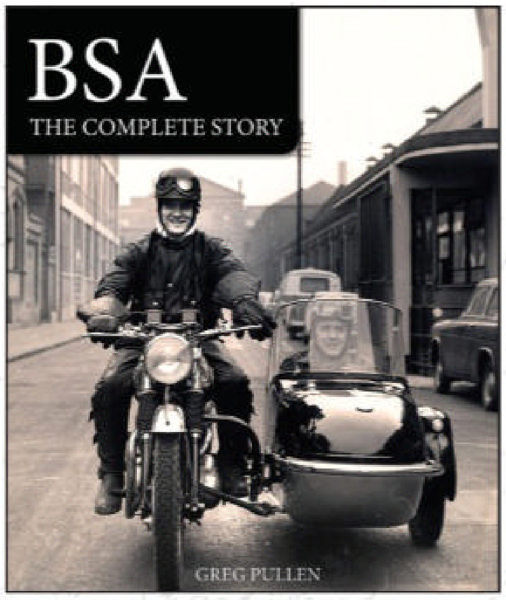
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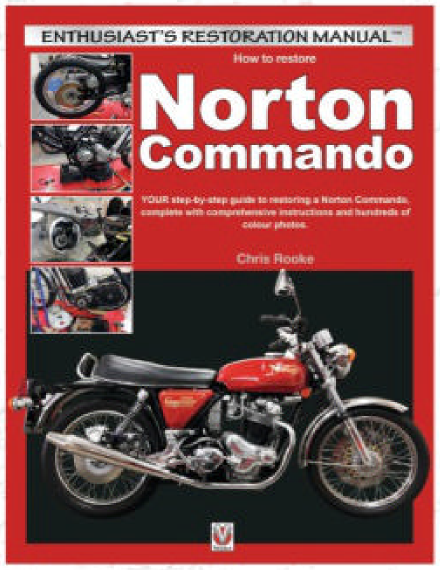
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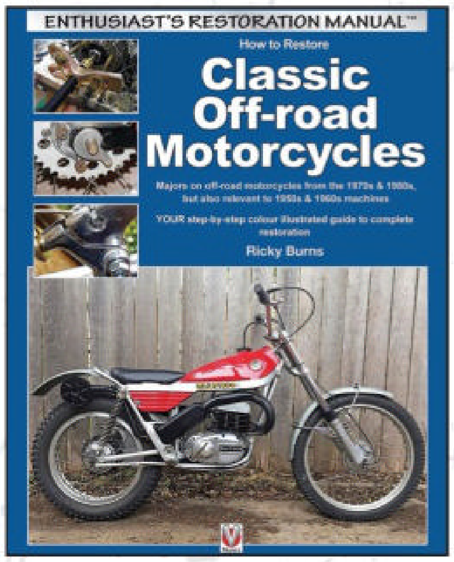
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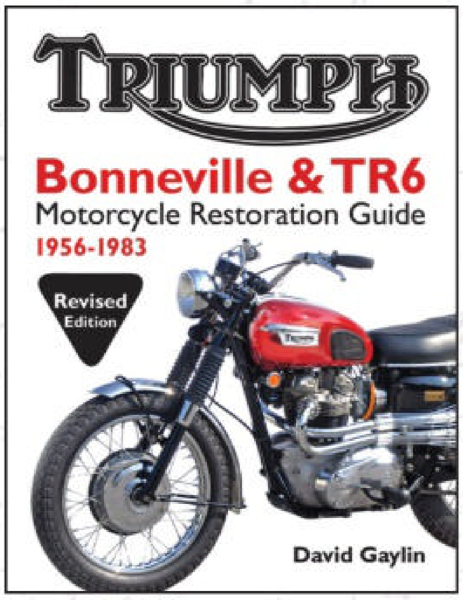
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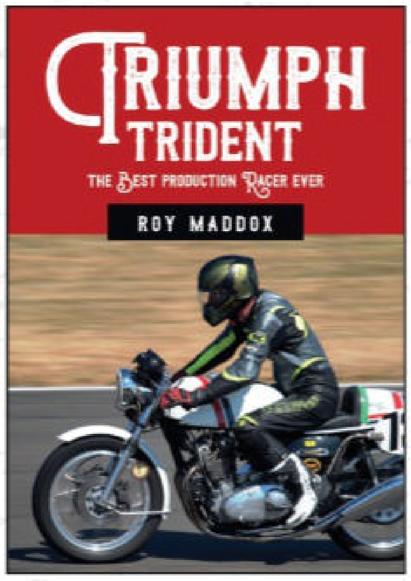
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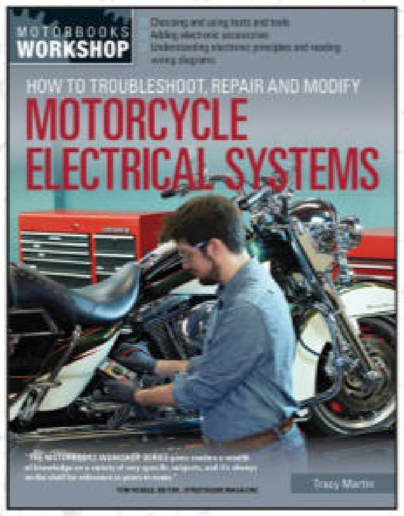
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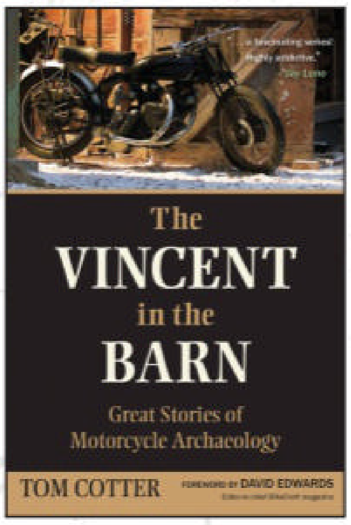
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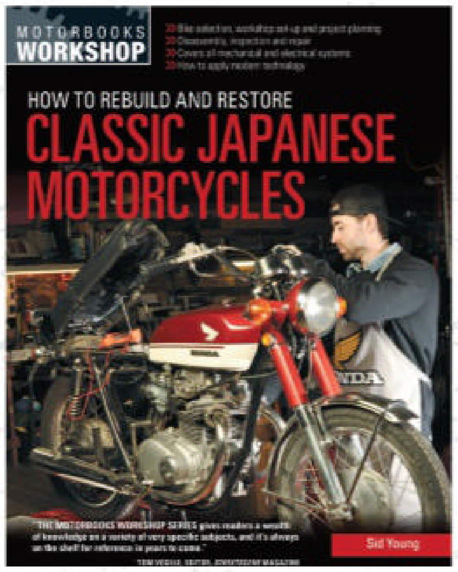
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ABC TV's *Superbikers*!

Superbiker Jeff Ward, riding his KX motocrosser, shod with flat track tires, over a paved section of the race course.

DAIN GINGERELLI COLLECTION

Fans of televised MotoGP and Supercross, take notice: Motorcycle racing hasn't always been accessible for TV broadcasting like it is today. Once upon a time, back in the 20th Century, very few motorcycle race events were broadcast on national TV. Then one day the ABC television network discovered the United States Grand Prix of motocross, held annually at Carlsbad Raceway; once a year race fans across America were treated to watching the small screen when the USGP aired on ABC's weekly Wide World of Sports program. And life was good — for one viewing day a year, that is.

Then, in 1982 ABC created its own motorcycle race, patterned specifically for TV. That event was the *Superbikers*, the brainchild of Trippe-Cox and Associates, who also had helped bring motorcycle racing to Laguna Seca Raceway in 1972. T-C had also created an event known as the Olympiad of Motorcycling in 1977, which actually set the premise for what became *Superbikers*. The Olympiad lasted only a couple years, before Gavin Trippe presented the idea for ABC's *Superbikers*, a motorcycle race that, they felt, would be suitable for ABC's production and film crews to broadcast nationally.

Trippe's plan was simple: Invite top racers from the three major forms of motorcycle competition — road racing, flat tracking and motocross — to compete against each other on a single course that integrated all three forms of racing. Rules were tailored to minimize the chance of any one rider dominating the day; everybody used 19-inch Carlisle flat track tires, and qualifying heats were limited to riders competing against others in their specialized field. That is, motocrossers raced other MXers, and so on in three qualifying heats; the top three finishers from each heat transferred to the Main. A wild card heat was tossed in for riders who failed to transfer, with the top three from that last-gasp effort advancing to the Main that featured 12 racers in all.

Like the USGP of motocross, the race was held at Carlsbad Raceway, incorporating portions of the motocross track that included a high-speed sweeper and TT jump for the flat track section. The racers eventually returned to the pavement (road race) to complete a lap. Doing so tested each rider's specialty.

Because the program was filmed rather than broadcast live, the TV production crew could tailor and edit the event into a viable segment that told the story in an economical and timely manner, allowing for back stories and interviews of the various riders, too. Among those in the field were Eddie Lawson and Wayne Rainey (road race), Jeff Ward and Kent Howerton (MX) Bubba Shobert and Ricky Graham (flat track), and so on.

The racing was close and competitive, plus the *Superbikers* showed the riders' versatility. Perhaps the racer to benefit most from the "audition" was Steve Wise, who later migrated from American Honda's motocross team to its vaunted road race team.

Eventually, though, program viewer numbers began to decline. Supercross was gaining inroads among enthusiasts during the '80s, prompting *Superbikers* officials to incorporate more SX-like features on the race course. Eventually interest among non-SX racers began to wane, until *Superbikers* became just another footnote in moto-history. Even so, it paved the way for televised MotoGP, Supercross and other forms of powersport competition popular today.

— Dain Gingerelli

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8	9	10	11	12	13	14
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